The EPA Administrator, Michael S. Regan, signed the following notice on 6/28/2024, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's govinfo website (https://www.govinfo.gov/app/collection/fr) and on Regulations.gov (https://www.regulations.gov) in Docket No. EPA-HQ-OAR-2017-0015. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2017-0015; FRL-5948.1-01-OAR]

RIN 2060-AV59

National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes our amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants (Lime Manufacturing NESHAP). Specifically, we are finalizing maximum achievable control technology (MACT) standards for hydrogen chloride (HCl), mercury, organic HAP, and dioxin/furans (D/F).

DATES: This final rule is effective on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The incorporation by reference (IBR) of certain publications listed in the rule is approved by the Director of the Federal Register as of **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The IBR of certain other material listed in the rule was approved by the Director of the Federal Register (FR) as of January 05, 2004, and July 24, 2020.

ADDRESSES: The U.S. Environmental Protection Agency (EPA) has established a docket for this action under Docket ID No. EPA-HQ-OAR-2017-0015. All documents in the docket are listed on the

https://www.regulations.gov/ website. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *https://www.regulations.gov/*, or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact U.S. EPA, Attn: Mr. Brian Storey, Mail Drop: D243-04, 109 T.W. Alexander Drive, P.O. Box 12055, RTP, North Carolina 27711; telephone number: (919) 541-1103; and email address: *storey.brian@epa.gov*.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this notice the use of "we," "us," or "our" is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

CAA	Clean Air Act
CFR	Code of Federal Regulations
DB	dead burned dolomitic lime
D/F	dioxin/furans
DL	dolomitic lime
DSI	dry sorbent injection
EJ	environmental justice
EPA	Environmental Protection Agency
ESP	electrostatic precipitator
FF	fabric filter
FR	*Federal Register*

g/dscm	grams of pollutant per dry standard cubic meter of air
HAP	hazardous air pollutant(s)
HBEL	health-based emission limit
HCl	hydrogen chloride
IQV	intra-quarry variability
lb/MMton	pounds of pollutant per million tons of lime produced at the kiln
lb/tsf	pounds of pollutant per ton of stone feed
MACT	maximum achievable control technology
NESHAP	national emission standards for hazardous air pollutants
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
PM	particulate matter
ppmvd	parts per million by volume, dry
PR	preheater rotary kiln
PRA	Paperwork Reduction Act
PSH	process stone handling
QL	quick lime
RDL	representative detection level
RFA	Regulatory Flexibility Act
RTR	residual risk and technology review
SR	straight rotary kiln
SSM	startup, shutdown, and malfunction
TEF	toxicity equivalence factors
THC	total hydrocarbons
tpy	tons of pollutant per year
UMRA	Unfunded Mandates Reform Act
UPL	upper predictive limit
VK	vertical kiln
VCS	voluntary consensus standards

Background information. On January 5, 2023, the EPA proposed revisions to the Lime Manufacturing NESHAP to complete the technology review, originally promulgated on July 24, 2020, by finalizing emission standards for 4 unregulated HAP. Based on the information available to EPA in 2023 at the time of the proposal, the EPA certified the rule as not having a significant economic impact on a substantial number of small entities (No SISNOSE). Following the publication of the NPRM, EPA

received additional data and feedback via public comments regarding the Agency's economic analysis, including information on the impacts to businesses that would be affected by the proposed rule. Our initial review of this updated information indicated that estimates of the control costs developed to support the proposal may have been understated and that there could accordingly be significant economic impacts to small businesses. On February 9, 2024, the EPA published a supplemental proposal to address information received from public commenters and other sources of information, including the small business review panel. The supplemental proposal addressed regulatory flexibilities raised during outreach to the small businesses impacted by proposed revisions to the Lime Manufacturing NESHAP. In this action, we are finalizing decisions and revisions to the rule based on the public comments received regarding both the January 5, 2023, proposed rule and the February 9, 2024, supplemental proposal. We summarize some of the more significant comments we received regarding the proposed and supplemental rule amendments and provide our responses in this preamble. A summary of all other public comments and the EPA's responses to those comments is available in the document titled, "Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Amendments", included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

Organization of this document. The information in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

Regulated entities. Categories and entities potentially regulated by this action are shown in table 1 of this preamble.

Table1. NESHAP and Industrial Source Categories Affected By This Final Action

Source Category and NESHAP	NAICS Code[1]
Lime Manufacturing	32741, 33111, 3314, 327125

[1]North American Industry Classification System (NAICS).

Table 1 of this preamble is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at: *https://www.epa.gov/stationary-sources-air-pollution/lime-manufacturing-plants-national-emission-standards-hazardous*. Following publication in the *Federal Register*, the EPA will post the *Federal Register* version and key technical documents at this same website.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review)

and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave., NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave., NW, Washington, DC 20460.

II. Background

A. What is the statutory authority for this action?

For major sources, the Clean Air Act (CAA) section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable after considering cost, energy requirements, and non-air quality health and environmental impacts. These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT "floor." The EPA must also consider control options that are more stringent than the floor, commonly referred to as "beyond-the-floor" (BTF) standards. Costs may not be considered when setting the MACT floor and may only be considered when determining whether BTF standards are appropriate. The EPA considered BTF standards but did not elect to set BTF standards in this rulemaking.

On January 5, 2023, the EPA proposed amendments to the Lime Manufacturing NESHAP to address unregulated emissions of HAP from the Lime Manufacturing source category. On February 9, 2024, the EPA supplemented its proposed amendments based on information received from commenters and other sources of information, including the small business review panel. In this notice, the EPA proposed revisions to the proposed MACT standards for HCl, mercury, organic HAP, and D/F for the Lime Manufacturing source category pursuant to the Clean Air Act (CAA) sections 112(d)(2) and (3).

The EPA is finalizing these amendments to the NESHAP to ensure that all emissions of HAP from sources in the source category are regulated.

In setting standards for major source categories under CAA section 112(d), the EPA has the obligation to address all HAP listed under CAA section 112(b).[1] In the *Louisiana Environmental Action Network* v. *EPA* decision issued on April 21, 2020, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) held that the EPA has an obligation to address unregulated emissions from a major source category when the Agency conducts the 8-year technology review required by CAA section 112(d)(6).[2] These amendments address currently unregulated emissions of HAP from the lime manufacturing source category.

B. What is the Lime Manufacturing source category and how does the NESHAP regulate HAP emissions from the source category?

The EPA promulgated the Lime Manufacturing NESHAP on January 5, 2004 (69 FR 394). The standards are codified at 40 CFR part 63, subpart AAAAA. The lime manufacturing industry consists of facilities that use a lime kiln to produce lime product from limestone by calcination. The source category covered by this MACT standard currently includes 34 facilities.

As promulgated in 2004, the current Lime Manufacturing NESHAP regulates HAP emissions from all new and existing lime manufacturing plants that are major sources, co-located with major sources, or are part of major sources. A lime manufacturing plant is defined as any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination. The NESHAP specifically excludes lime kilns that use only calcium carbonate waste sludge from water

[1] *Desert Citizens against Pollution v. EPA*, 699 F3d 524, 527 (D.C. Cir. 2012)("[W]e have read subparagraphs (1) and (3) of 40 CFR 112(d) to require the regulation of all HAPs listed in 40 CFR 112(b)(1)), citing *Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 633–34 (D.C.Cir. 2000) and *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C.Cir. 2007).

[2] *Louisiana Environmental Action Network* v. *EPA,* 955 F.3d 1088 (D.C. Cir. 2020).

softening processes as the feedstock. In addition, lime manufacturing plants located at pulp and paper mills or at beet sugar factories are not subject to the NESHAP. Lime manufacturing operations at pulp and paper mills are subject to the NESHAP for combustion sources at kraft, soda, and sulfite pulp and paper mills.[3] Lime manufacturing operations at beet sugar processing plants are not subject to the Lime Manufacturing NESHAP because beet sugar lime kiln exhaust is typically routed through a series of gas washers to clean the exhaust gas prior to process use. Other lime manufacturing plants that are part of multiple operations, such as (but not limited to) those at steel mills and magnesia production facilities, are subject to the Lime Manufacturing NESHAP.

The current Lime Manufacturing NESHAP defines the affected source as each lime kiln and its associated cooler and each individual processed stone handling (PSH) operations system. The PSH operations system includes all equipment associated with PSH operations beginning at the process stone storage bin(s) or open storage pile(s) and ending where the process stone is fed into the kiln. It includes man-made process stone storage bins (but not open process stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors.

The current Lime Manufacturing NESHAP established particulate matter (PM) emission limits for lime kilns, coolers, and PSH operations with stacks. The NESHAP also established opacity limits for kilns equipped with electrostatic precipitators (ESP) and fabric filters (FF) and scrubber liquid flow limits for kilns equipped with wet scrubbers. Particulate matter serves as a surrogate for the non-mercury metal HAP. The NESHAP also regulates opacity or visible emissions from most of the PSH operations, with opacity also serving as a surrogate for HAP metals.

[3] 66 FR 3180, January 12, 2001.

The PM emission limit for existing kilns and coolers is 0.12 pounds PM per ton of stone feed (lb/tsf) for kilns using dry air pollution control systems (*e.g.*, dry scrubbers, fabric filters, baghouses) prior to January 5, 2004. Existing kilns that have installed and are operating wet scrubbers prior to January 5, 2004, must meet an emission limit of 0.60 lb/tsf. Kilns which meet the criteria for the 0.60 lb/tsf emission limit must continue to use a wet scrubber for PM emission control in order to be eligible to meet the 0.60 lb /tsf limit. If at any time such a kiln switches to a dry control, it would become subject to the 0.12 lb/tsf emission limit, regardless of the type of control device used in the future. The PM emission limit for all new kilns and lime coolers is 0.10 lb/tsf. As a compliance option, these emission limits (except for the 0.60 lb/tsf limit) may be averaged across kilns and coolers at the lime manufacturing plant. If the lime manufacturing plant has both new and existing kilns and coolers, then the emission limit would be an average of the existing and new kiln PM emissions limits, weighted by the annual actual production rates of the individual kilns, except that no new kiln may exceed the PM emission level of 0.10 lb/tsf. Existing kilns that have installed and are operating wet scrubbers prior to January 5, 2004, and that are required to meet a 0.60 lb/tsf emission limit must meet that limit individually, and they may not be included in any averaging calculations.

Emissions from PSH operations that are vented through a stack are subject to a limit of 0.05 grams PM per dry standard cubic meter (g/dscm) and 7 percent opacity. Stack emissions from PSH operations that are controlled by wet scrubbers are subject to the 0.05 g PM/dscm limit but are not subject to the opacity limit. Fugitive emissions from PSH operations are subject to a 10 percent opacity limit.

For each building enclosing any PSH operation, each of the affected PSH operations in the building must comply individually with the applicable PM and opacity emission limitations. Otherwise, there must be no visible emissions from the building, except from a vent, and the building's vent emissions must not exceed 0.05 g/dscm and 7 percent opacity. For each fabric filter that controls

emissions from only an individual, enclosed processed stone storage bin, the opacity must not exceed 7 percent. For each set of multiple processed stone storage bins with combined stack emissions, emissions must not exceed 0.05 g/dscm and 7 percent opacity. The current Lime Manufacturing NESHAP does not allow averaging of PSH operations.

The 2020 amendments finalized the residual risk and technology review (RTR) conducted for the Lime Manufacturing NESHAP. The July 24, 2020, RTR (85 FR 44960) found that the Lime Manufacturing NESHAP provided an ample margin of safety to protect public health, that more stringent standards were not necessary to prevent an adverse environmental effect, and that there were no developments in practices, processes, or control technologies that would warrant revisions to the standards. In addition, the 2020 RTR addressed periods of startup, shutdown, and malfunction (SSM) by removing any exemptions during SSM operations. Lastly, the 2020 amendments included provisions requiring electronic reporting.

C. What changes did we propose for the lime manufacturing source category in our February 9, 2024, proposal?

On February 9, 2024, the EPA published a supplemental proposal in the *Federal Register* for the Lime Manufacturing NESHAP, 40 CFR part 63, subpart AAAAA, in which the EPA proposed setting MACT standards for HCl, mercury, organic HAP, and D/F. Table 2 includes a summary of the MACT standards in the February 9, 2024, supplemental proposal.

Table 2. Summary of New and Existing Source Limits For the Lime Manufacturing NESHAP Included In The February 9, 2024, Supplemental Proposal

Pollutant	Kiln Type[1]	Lime Produced[2]	New Source Limit	Existing Source Limit	Unit of Measure
Hydrogen Chloride	SR	QL	0.015	0.52	lb/ton lime produced
	SR	DL, DB	1.7	2.3	lb/ton lime produced

	PR	QL	0.096	0.096	lb/ton lime produced
	PR	DL, DB	0.39	0.39	lb/ton lime produced
	VK	QL	0.021	0.021	lb/ton lime produced
	VK	DL, DB	0.39	0.39	lb/ton lime produced
Mercury	All	All	27	34	lb/MMton lime produced
Organic HAP[3]	All	All	1.7	1.7	ppmvd at 7 percent O_2
Dioxin/Furan	All	All	0.037	0.037	ng/dscm (TEQ) at 7 percent O_2

[1]Straight rotary kiln (SR), preheater rotary kiln (PR), vertical kiln (VK).
[2]Dolomitic lime (DL), quick lime (QL), dead burned dolomitic lime (DB).
[3]Organic HAP include formaldehyde, acetaldehyde, toluene, benzene, xylenes (a mixture of o, m, and p isomers), styrene, ethyl benzene, and naphthalene.

D. What outreach did we conduct following the January 5, 2023, proposal?

The EPA convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations from small entity representatives (SERs) that could be subject to the Lime Manufacturing NESHAP requirements. On August 3, 2023, the EPA's Small Business Advocacy Chairperson convened the Panel, which consisted of the Chairperson, the Director of the Sector Policies and Programs Division within the EPA's Office of Air Quality Planning and Standards, the Administrator of the Office of Information and Regulatory Affairs within OMB, and the Chief Counsel for Advocacy of the Small Business Administration (SBA).

Prior to convening the Panel, the EPA conducted outreach and solicited comments from the SERs. After the Panel was convened, the Panel provided additional information to the SERs and requested their input. The Panel's review identified several significant alternatives for consideration by the Administrator of the EPA which would accomplish the stated objectives of the CAA and would minimize economic impacts of the proposed rule on small entities.

The SBAR Panel recommended several flexibilities including the consideration of health-based standards for HCl, an intra-quarry variability (IQV) for mercury, an aggregated organic HAP emission standard, retaining subcategorization for HCl numeric emissions limits, and work practice standards for D/F in place of a numeric limit. The EPA is including some of these flexibilities as a part of this final rule, including subcategorization of HCl emission limits, an IQV factor for mercury, and an aggregated organic HAP emission limit. A copy of the full SBAR Panel Report is available in the docket of this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

III. What is the rationale for our final decisions and amendments for the Lime Manufacturing source category?

The EPA is finalizing MACT standards for HCl, mercury, organic HAP, and D/F within the Lime Manufacturing source category pursuant to the Clean Air Act (CAA) sections 112(d)(2) and (3). Additionally, we are finalizing an emissions averaging compliance alternative that allows lime manufacturing facilities to demonstrate compliance with the HCl and mercury standards by averaging emissions of each pollutant across existing kilns located at the same facility. This section provides a description of what we proposed and what we are finalizing, a summary of key comments and responses, and the EPA's rationale for the final decisions and amendments. For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the document, *Summary of Public Comments and Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing*, which is available in the docket for this action.

A. Hydrogen Chloride Emission Standards

1. What comments did we receive on the hydrogen chloride emission standards, and what are our responses?

The following key comments were received regarding the HCl emission standards as proposed in the January 5, 2023, proposal, and February 9, 2024, supplemental proposal. The EPA responses to each comment are included. All comments regarding HCl not discussed in this section, and the EPA's responses can be found in the document, *Summary of Public Comments and Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing*, which is available in the docket for this action.

Comment: While the EPA received comments in support of the subcategorization of HCl emission standards by kiln type and lime produced, the EPA also received opposing comments which state that the proposed subcategories by lime produced for HCl are unlawful because they are not based on differences in the class, type, or size of lime kilns. Commenter stated that the CAA section 112(d)(1) allows the EPA only to distinguish between "classes, types, and sizes" of sources in setting emission standards for a category.

Response: The EPA disagrees with the commenter. The EPA determined that subcategorization by lime produced was warranted because the characteristics of DL and QL are different, where DL is made from naturally occurring limestone with a higher percentage of magnesium chloride, and QL has a lower chloride content. Given that HCl emissions from a lime manufacturing process are primarily driven by the heating of raw materials being processed in the lime kiln, the EPA finds that these differences in chloride content of the limestone being fed to a kiln as raw material warrant subcategorization. For these reasons the EPA has decided it is warranted to set subcategorizations by the type of lime produced (*e.g.,* DL, QL).

Comment: In the February 9, 2024, supplemental proposal, the EPA asked for public comment on the use of a health-based emission limit (HBEL), under CAA section 112(d)(4), when determining the appropriate emission standards for HCl. The EPA received comments on the supplemental proposal both supporting setting an HBEL and against setting an HBEL for HCl. Commenters supporting an

HBEL for HCl agreed with the EPA's assertion that HCl is a "threshold pollutant" and stated that current levels of HCl emissions from lime kilns are well below the threshold levels of concern for human receptors. In support, commenters supporting the use of an HBEL cited the 2020 RTR, where the EPA found that the risks of lime manufacturing under the current MACT standards were acceptable and that the current NESHAP provides an ample margin of safety to protect public health. Commenters opposed to the use of an HBEL for HCl stated that the EPA had not provided substantial evidence that HCl is not carcinogenic. Therefore, they stated, HCl cannot be a threshold pollutant, and the EPA cannot establish an HBEL for HCl.

Response: The EPA acknowledges comments received on whether it is appropriate to consider HCl a threshold pollutant as defined under the CAA section 112(d)(4). The EPA is mindful that, in *Sierra Club v. Environmental Protection Agency*, 895 F.3d 1 (D.C. Cir. 2018), the court determined that the rulemaking record did not show that HCl is not a carcinogen. 895 F.3d at 11. Based on the science and methods developed over the last 33 years, we believe the issue in setting a standard under CAA section 112(d)(4) is not necessarily whether HCl is a carcinogen but rather whether HCl has a threshold with an ample margin of safety. Thus, in the supplemental proposal, we stated that a chemical's mechanism of action (e.g., mutagenic, or non-mutagenic) is an important consideration when determining if a pollutant has a threshold.

The EPA agrees with commenters' assertions[4] that we cannot claim that mutagenicity is the sole test to determine whether a pollutant has a threshold, for cancer or other adverse health effects.

[4] Refer to document titled, "Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Amendments", section 2, comment 1.

We acknowledge industry comments in support of an HBEL and that current HCl emissions based upon the 2020 RTR are at levels that were acceptable with an ample margin of safety. However, considering the other comments received, we have decided not to promulgate an HBEL for HCl.

2. What did we propose and what are the final hydrogen chloride emission standards in this final rule?

Emissions data collected in support of the 2020 RTR indicated the presence of HCl, using EPA Methods 320 and 321. Additionally, the EPA evaluated the types of kilns and lime produced for which data was available. From our discussions with industry representatives, and our review of the HCl emissions data, we found that the configuration of the different types of kilns warranted subcategorization by kiln configuration. In the final rule amendments, we have subcategorized the HCl MACT standards by the following kiln types: straight rotary kiln (SR), preheater rotary kiln (PR), and vertical kiln (VK). In addition, due to the different residence times of the raw materials within the heating zone of the kiln during the production of lime, the 3 types of lime produced also warranted subcategorization by lime type. We have also subcategorized the HCl MACT standards by the following types of lime produced: dolomitic lime (DL), quick lime (QL), and dead burned dolomitic lime (DB).

To account for variability in the lime manufacturing operations and resulting emissions, the stack test data were used to calculate the HCl MACT floor limits based on the 99 percent upper predictive limit (UPL). In some instances, subcategorization resulted in limited datasets, and a single dataset was used to calculate both existing and new source HCl MACT floor limits. In these instances, the existing source HCl MACT floor limit is the same as the new source HCl MACT floor limit. The HCl MACT floor limits were calculated based on units of pounds of pollutant per ton of lime produced (lb/ton lime produced). Table 3 summarizes the new and existing source emission limits for HCl in the final amendments to the Lime Manufacturing NESHAP.

Table 3. Summary of Final New and Existing Source Limits For Hydrogen Chloride

Kiln Type[1]	Lime produced[2]	New Source Limit (lb/ton lime produced)	Existing Source Limit (lb/ton lime produced)
SR	QL	0.015	0.52
SR	DL, DB	1.7	2.3
PR	QL	0.096	0.096
PR	DL, DB	0.39	0.39
VK	QL	0.021	0.021
VK	DL, DB	0.39	0.39

[1] Straight rotary kiln (SR), preheater rotary kiln (PR), vertical kiln (VK)
[2]Dolomitic lime (DL), quick lime (QL), dead burned dolomitic lime (DB)

B. Mercury Emission Standards

1. What comments did we receive on the mercury emission standards, and what are our responses?

The following key comments were received regarding the mercury emission standards as proposed in the January 5, 2023, proposal, and February 9, 2024, supplemental proposal. The EPA responses to each comment are included. For all comments regarding mercury not discussed in this section, and the EPA's responses can be found in the document, *Summary of Public Comments and Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing*, which is available in the docket for this action.

Comment: Commenters supported the use of an intra-quarry variability factor (IQV) for mercury but commented that the February 9, 2024, supplemental proposal should be adjusted to allow sources more flexibility in meeting the mercury standards. In a separate comment, a commenter suggested that the EPA should collect additional data to support variability in the quarry data.

Response: The final rule includes an IQV factor based on our statistical analysis of the quarry data provided by National Lime Association (NLA) for the Carmeuse Maysville and Graymont Eden lime manufacturing facilities. Case law on the use of an IQV factor in a rule requires the EPA to only consider quarry data representing the facilities that are in the MACT floor pool ("best performers"). The MACT floor pool in the lime source category consisted of two facilities: the Carmeuse Maysville and

Graymont Eden lime manufacturing facilities. The quarry data from these 2 facilities were used to calculate the IQV factor in the February 9, 2024, supplemental proposal. No other quarry data were provided for the Carmeuse Maysville or Graymont Eden facilities during the public comment period, and, therefore, the quarry data of the Carmeuse Maysville and Graymont Eden facilities used to propose the IQV factor in the February 9, 2024, supplemental proposal was also used to set the IQV factor in this final rule.

2. What did we propose and what are the final mercury emission standards in this final rule?

Emissions data collected in support of the 2020 RTR based on EPA Methods 29 and 30B indicated the presence of mercury in emissions from lime manufacturing facilities. In the February 9, 2024, proposal the EPA evaluated the use of an intra-quarry variability (IQV) factor to be applied in the mercury UPL calculations to account for the naturally occurring variability in mercury content of the raw materials. Consistent with the approach followed in the Portland Cement Manufacturing NESHAP, 40 CFR Part 63, subpart LLL, and the Brick and Structural Clay Products NESHAP, 40 CFR Part 63, subpart JJJJJ, the IQV factor accounts for this variability in the mercury content of the raw material over geological time. For the reasons explained in the supplemental proposal, we are using an IQV factor in calculating the final mercury MACT standards.

As part of the evaluation of a mercury standard with the inclusion of an IQV factor, the EPA reevaluated whether a separate subcategory was necessary for kilns producing DB, as proposed in the January 5, 2023, proposed amendments. To do this, we first developed standards based on no subcategorization and the application of an IQV factor. The result of this analysis was 27 lb Hg/MMton for new sources and 34 lb Hg/MMton for existing sources. The EPA determined, based on the available test data, that kilns producing DB would be able to comply with the existing source standard after the application of air pollution controls. This determination differs from the evaluation the EPA performed when setting subcategories for HCl, where the chloride content of the raw materials indicated significant

differences in the HCl emissions from the lime kilns. For consideration of mercury subcategories, after the application of an IQV factor, the new and existing mercury emission limits for kilns producing DL and QL were found to be similar to the emission limits for kilns producing DB lime, and therefore no subcategorization was determined to be needed due to these negligible differences in emissions between the types of lime produced. No additional data were provided during the supplemental proposal that would suggest or warrant setting subcategories for mercury. Therefore, we determined in this final action to not create subcategories based on stone produced in setting mercury emission limits.

To account for variability in the lime manufacturing operations and resulting emissions, the stack test data were used to calculate the mercury MACT floor limits based on the 99 percent UPL. The mercury MACT floor limits were calculated in units of pounds of pollutant per million tons of lime produced (lb/MMton lime produced). The final mercury emission limits for new and existing sources, including the IQV factor and without subcategories, are included in table 4.

Table 4. Summary of Final New and Existing Source Limits For Mercury

Kiln Type	Lime produced	New Source Limit (lb/MMton lime produced)	Existing Source Limit (lb/MMton lime produced)
All	All	27	34

C. Organic HAP Emission Standards

1. What comments did we receive on the organic HAP emission standards, and what are our responses?

The following key comments were received regarding the THC and organic HAP emission standards as proposed in the January 5, 2023, proposal, and February 9, 2024, supplemental proposal, respectively. The EPA responses to each comment are included. For all comments not discussed in this section, and the EPA's responses, can be found in the document, *Summary of Public Comments and*

Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing, which is available in the docket for this action.

Comment: Commenters stated that the measured detection levels (MDL) used to calculate the aggregate organic HAP limit of the February 9, 2024, supplemental proposal should be summed on the same basis of moisture and oxygen. Commenters stated that the detection limit values do not appear to contain a correction for moisture, which can cause a significant difference in the final result. Similarly, as the final results are all to be corrected to a 7 percent oxygen concentration, an average oxygen concentration adjustment should also be made to the MDL values used for the floor calculation. Commenters argue that as this total result may contain some mix of detected and non-detected compounds, the MDL used for this standard setting should include this adjustment criteria.

Response: The EPA agrees with the commenters that the representative detection level (RDL) for the EPA Method 320 results should be adjusted to dry (EPA Method 18 results are already dry), and that the final organic HAP RDL should be corrected to 7 percent oxygen prior to comparing to the UPL. We have revised the memo and the RDL accordingly as well as correcting the emission limits for the new value.

2. What did we propose and what are the final organic HAP emission standards in this final rule?

The 2020 RTR emissions data included the results of testing 34 kiln exhaust stacks for the presence of total hydrocabons (THC) using EPA Method 25A. In addition, industry stakeholders provided emissions testing data that identified specific non-dioxin organic HAP. Based on an assessment of the available test data, the EPA identified 8 specific pollutants that were consistently emitted by the Lime Manufacturing source category. These include formaldehyde, acetaldehyde, toluene, benzene, xylenes (a mixture of o, m, and p isomers), styrene, ethyl benzene, and naphthalene. The EPA determined from the 2020 RTR emissions data that the emissions of these 8 pollutants were consistently being emitted by the source category. Although the data suggested that other organic HAP were being

emitted, the data indicated that the 8 pollutants were consistently being emitted by all sources for which we had data. Furthermore, the EPA determined that controlling the emissions of these 8 pollutants from a lime manufacturing facility would also control the facility's emissions of these other organic HAP. For these reasons, the EPA is finalizing the use of an aggregated emission limit for the 8 organic HAP identified in the data analysis as a surrogate for total organic HAP, which by controlling the emissions of these 8 pollutants from a lime manufacturing facility emission source (*i.e.*, lime kiln) a facility will also control the facility's emissions of any other organic HAP from the same source. Refer to the memorandum, "Final Maximum Achievable Control Technology (MACT) Floor Analysis for the Lime Manufacturing Plants Industry," which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2017-0015).

For each of the 8 organic HAP, the EPA calculated the emission limit value equivalent to 3 times the representative detection level (3xRDL) of the test method. The total of these was then compared to UPL calculations for the 8 pollutants. The new and existing UPLs were calculated based on a ranking of the average emission rates for the 8 organic HAP. In all cases for both new and existing sources, the 3xRDL value, which represents the lowest value that can be accurately measured, was above the calculated UPL. We are accordingly finalizing the MACT floor at this level. The new and existing source organic HAP MACT floor limits are summarized in table 5.

Table 5. Summary of Final New and Existing Source Limits For Organic HAP

Kiln Type	Lime produced	New Source Limit[1] (ppmvd at 7 percent O_2)	Existing Source Limit[1] (ppmvd at 7 percent O_2)
All	All	2.6	2.6

[1] New and existing source organic HAP emission limit defined as the sum of 8 organic HAP identified as: formaldehyde, acetaldehyde, toluene, benzene, xylenes (a mixture of o, m, and p isomers), styrene, ethyl benzene, and naphthalene.

D. Dioxin/Furan Emission Standards

1. What comments did we receive on the dioxin/furan emission standards, and what are our responses?

The following key comments were received regarding the D/F emission standards as proposed in the January 5, 2023, proposal, and February 9, 2024, supplemental proposal. The EPA responses to each comment are included. For all comments regarding D/F not discussed in this section, and the EPA's responses, can be found in the document, *Summary of Public Comments and Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing*, which is available in the docket for this action.

Comment: Commenters indicated that in the absence of adequate data to set a numeric standard, the D.C. Circuit has upheld the EPA's promulgation of a non-numeric work practice standard. *Chesapeake Climate Action Network v. EPA*, 952 F.3d 310, 315 (D.C. Cir. 2020). Commenters stated that the EPA repeatedly and consistently informed them that the Agency was planning to issue a work practice for D/F because the D/F data showed that more than 55 percent of test results were non-detect. Commenters stated that they had multiple conversations with the EPA on the form a work practice could take, and that they submitted a suggested work practice (Docket ID No. EPA-HQ-OAR-2017-0015-0090 and attachment). Commenters reiterated that due to extremely low D/F emissions, an appropriate work practice would require sources to properly operate the air pollution control devices already in place to control particulate matter.

Response: As described in the memorandum, "Final Maximum Achievable Control Technology (MACT) Floor Analysis for the Lime Manufacturing Plants Industry," which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2017-0015), half of the available test data was greater than the minimum detection limit, as determined according to the June 5, 2014, memorandum titled, "Determination of 'non-detect' from EPA Method 29 (multi-metals) and EPA Method 23 (dioxin/furan) test data when evaluating the setting of MACT floors versus establishing work practice standards" (Docket ID No. EPA-HQ-OAR-2017-0015-0117) (Johnson 2014). Further, the EPA had in its

possession data showing that at least one kiln emitted D/F at a level above 3xRDL. These facts demonstrates that the requirements to promulgate work practice standard (*i.e.*, that it is infeasible to measure emissions) has not been met. In accordance with CAA section 112(h), a work practice must be consistent with the requirements of setting emission standards detailed in section 112(d) of the CAA, (*i.e.,* it represents the average emissions performance for 12 percent of the best performing sources for existing sources, or the best performing source for new sources). No data was provided by the commenter's referenced material of a work practice which showed it represented the performance of the best performing sources; therefore, the EPA cannot determine if a work practice would be consistent with the requirements of section 112(d). As a general matter, lime production and kiln operations are not typical combustion sources where the majority of emissions are generated by the raw materials being heated in the kiln and for these reasons, the EPA did not set an alternative work practice standard in the final rule.

2. What did we propose and what are the final dioxin/furan emission standards in this final rule?

The 2020 RTR emissions data indicated the presence of D/F using EPA Method 23. The EPA followed the guidance of the Johnson 2014 memorandum (Docket ID No. EPA-HQ-OAR-2017-0015-0117), in using detection limits as an indicator of the measurable presence of a given pollutant, specifically where multi-component samples, such as with D/F congeners, are the pollutants of concern. Additionally, the EPA used the procedures laid out in the December 13, 2011, memorandum titled "Data and procedure for handling below detection level data in analyzing various pollutant emissions databases for MACT and RTR emissions limits" (Docket ID No. EPA-HQ-OAR-2017-0015-0119). Similar to organic HAP, and in accordance with these guidance documents, the new and existing UPL for D/F were compared to the emission limit value determined to be equivalent to 3xRDL of the test method, and the 3xRDL value was found to be greater than the UPL. Therefore, the MACT floor limit

for D/F was set based on the 3xRDL value of the test method. The D/F MACT floor limits for new and existing sources are summarized in table 6.

Table 6. Summary of Final New and Existing Source Limits For Dioxin/Furans

Kiln Type	Lime produced	New Source Limit	Unit of Measure	Existing Source Limit	Unit of Measure
All	All	0.037	ng/dscm (TEQ) @ 7 percent O_2	0.037	ng/dscm (TEQ) @ 7 percent O_2

E. What other changes have been made to the NESHAP?

1. What comments did we receive on the January 5, 2023, proposed rule and February 9, 2024, supplemental proposal, and what are our responses?

The following key comments were received regarding other changes proposed in the January 5, 2023, proposal, and February 9, 2024, supplemental proposal. The EPA responses to each comment are included. For all comments not discussed in this section, and the EPA's responses, see the document, *Summary of Public Comments and Responses for Proposed Amendments to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing*, which is available in the docket for this action.

Comment: Commenters state that the EPA should allow for emissions averaging for organic HAP and for D/F. The commenters also suggest emissions averaging between subcategories, and between new and existing sources. Lastly, commenters stated that the requirement to submit an emission averaging plan for approval is unnecessary and unduly burdensome.

Response: The EPA disagrees with the commenters that the suggested revisions to the proposed emissions averaging compliance option would be appropriate. The EPA has generally imposed limits on the scope and nature of emissions averaging programs to assure that such programs achieve at least equivalent reductions in emissions as the primary standards. These limits include: (1) no averaging

between different pollutants; (2) no averaging between sources that are not part of the same affected facility; (3) no averaging between individual sources within a single major source if the individual sources are not subject to the same NESHAP; and (4) no averaging between existing sources and new sources. The emissions averaging allowed under the emissions averaging compliance option in this final action fully satisfies each of these criteria. The EPA has included emissions averaging provisions for single kilns producing multiple types of lime as product.

The EPA disagrees with the commenter that the emissions averaging should include organic HAP and D/F. The organic HAP and D/F emission limits include multiple pollutants and congeners, and facilities will emit various combinations of these groups of pollutants. We find that emissions averaging is not appropriate for these groupings of pollutants in this source category. Consistent with emissions averaging programs in other source categories, the EPA is finalizing the emissions averaging compliance option as proposed, with restrictions against averaging between new and existing sources, or between subcategories. Although the requirement to submit an emissions averaging plan for approval is being finalized as proposed, the EPA has adjusted the deadline for submitting the emissions averaging plan from 180 days to 60 days before the compliance demonstration making the emissions averaging plan less burdensome.

2. What changes are included in this final rule?

We are finalizing an emissions averaging compliance alternative that allows lime manufacturing facilities to demonstrate compliance with the HCl and mercury standards by averaging emissions of each pollutant across existing kilns located at the same facility. Under these emissions averaging compliance alternative, a facility with more than one existing kiln may average emissions across the kilns located at the facility provided that the overall average emissions from the kilns demonstrating compliance under this provision do not exceed the limits included in table 7.

Table 7. Emissions Averaging Compliance Alternative For HCl and Mercury

Pollutant	Kiln Type[1]	Lime produced[2]	Emissions Averaging Alternative Limit	Unit of Measure
Hydrogen Chloride	SR	DL, DB	2.1	lb/ton lime produced
	SR	QL	0.47	lb/ton lime produced
	PR	DL, DB	0.36	lb/ton lime produced
	PR	QL	0.087	lb/ton lime produced
	VK	DL, DB	0.36	lb/ton lime produced
	VK	QL	0.019	lb/ton lime produced
Mercury	All	All	31	lb/MMton lime produced

[1]Straight rotary kiln (SR), preheater rotary kiln (PR), vertical kiln (VK).
[2]Dolomitic lime (DL), quick lime (QL), dead burned dolomitic lime (DB).

The emission limits included in table 7 reflect a 10 percent adjustment factor to the MACT floor standard. We expect that these emission limits would result in reductions of HCL and mercury greater than those achieved by application of the MACT floor on a unit-by-unit basis.

The emissions averaging program has restrictions. First, emissions averaging is not allowed between different pollutants. Second, emissions averaging is only permissible among individual existing affected units at a single lime manufacturing plant. Third, emissions averaging is only permitted among kilns in the same subcategory. Lastly, new affected sources cannot use emissions averaging for compliance purposes.

We are finalizing a requirement for each facility intending to use this emissions averaging program to develop an emissions averaging plan that identifies: (1) all units in the averaging group; (2) the control technology installed; (3) the process parameter(s) that will be monitored; (4) the specific

control technology or pollution prevention measure to be used; (5) the test plan for measuring the HAP being averaged; and (6) the operating parameters to be monitored for each control device.

F. Severability of Standards

This final rule includes MACT standards promulgated under CAA section 112(d)(2)-(3). We intend each separate portion of this rule to operate independently of and to be severable from the rest of the rule. Each set of standards rests on stand-alone scientific determinations that do not rely on judgments made in other portions of the rule. The EPA also finds that the implementation of each set of CAA 112(d)(2)-(3) MACT standards, including monitoring, record keeping, and reporting requirements, is independent. Thus, each aspect of the EPA's overall approach to this source category could be implemented even in the absence of any one or more of the other elements included in this final rule. Accordingly, the EPA finds that each set of standards in this final rule is severable from and can operate independently of each other set of standards.

G. What are the effective and compliance dates of the standards?

The revisions to the MACT standards being promulgated in this action are effective on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The compliance date for existing sources is **[INSERT DATE 3 YEARS AFTER PUBLICATION IN THE FEDERAL REGISTER]**. New sources must comply with all of the standards immediately upon the effective date of the standard, **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or upon startup, whichever is later.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

The following analyses of costs and benefits, and environmental, economic, and environmental justice impacts are presented for the purpose of providing the public with an understanding of the potential consequences of this final action. The EPA's obligation to conduct an analysis of the potential costs and benefits under Executive Order 12866 is distinct from its obligation in setting standards under CAA section 112 to take costs into account.

A. What are the affected facilities?

Currently, 34 major sources subject to the Lime Manufacturing NESHAP are operating in the United States. An affected source under the NESHAP is a lime manufacturing plant that is a major source, or that is located at, or is a part of, a major source of HAP emissions, unless the lime manufacturing plant is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes. A lime manufacturing plant is an establishment engaged in the manufacture of lime products (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells, or other calcareous substances. A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons or more, or any combination of HAP at a rate of 25 or more per year from all emission sources at the plant site.

The Lime Manufacturing NESHAP applies to each existing or new lime kiln and their associated cooler(s). In addition, the NESHAP applies to each PSH operation located at the plant. This includes storage bins, conveying systems and transfer points, bulk loading and unloading operations, screening operations, surge bins, and bucket elevators.

B. What are the air quality impacts?

This action finalizes standards for HCl, mercury, organic HAP, and D/F that will limit emissions and require, in some cases, the installation of additional controls at lime manufacturing plants at major sources. Compliance with the emission standards set in this final rule will result in a combined reduction

of total HAP of 893 tons of HAP per year. Specifically, the emission standards of this action will reduce HCl emissions by 884 tons per year (tpy). The emission standards of this action will reduce mercury emissions by 457 lbs per year (0.23 tpy). The emission standards of this action will reduce organic HAP emissions by 8 tpy. Finally, the emission standards of this action will reduce D/F emissions by $9.5x10^{-5}$ lbs per year ($4.7x10^{-8}$ tpy).

Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (*e.g.*, increased secondary emissions of criteria pollutants from power plants). These secondary impacts typically include the energy needed to power the control devices, solid waste and wastewater generated from operation of the control devices, and air emissions that result from the generation of electricity used to operate the control devices. Secondary emissions typically include carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter (PM), particulate matter less than 2.5 microns (PM2.5), sulfur dioxide (SO2), carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O). However, the extent of the increase in these pollutants is highly dependent on the type of fuel used in the EGUs. The EPA does not have any information that suggests that facilities in the lime manufacturing source category generate their own electricity and did not receive any new information about the source of electricity for these facilities from the request for comments in the supplemental proposal. Refer to the "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants," in the docket for a detailed discussion of the analyses performed on potential secondary impacts and estimates of the total energy, solid waste, and wastewater impacts associated with the estimated controls required for compliance with the final standards. (Docket ID No. EPA-HQ-OAR-2017-0015).

C. What are the cost impacts?

This action finalizes emission limits for new and existing sources in the Lime Manufacturing source category. Although the action contains requirements for new sources and we requested comment on new construction or plans for expanding facilities/operations; we are not aware of any new sources being constructed now or planned in the next 3 years, and, consequently, we did not estimate any cost impacts for new sources. We lack the data and modeling necessary to predict changes in the demand for lime manufacturing facilities due to other rulemakings or funded construction projects from the Inflation Reduction Act or Infrastructure Investment and Jobs Act. We estimate the total capital investment for existing sources in the Lime Manufacturing source category to be $485,000,000 and the total annualized cost of the final rule to be $166,000,000 per year. The annual costs are expected to be based on operation and maintenance of the added control systems. A memorandum titled "Final Cost Impacts for the Lime Manufacturing Plants Industry" includes details of our cost assessment and is included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

D. What are the economic impacts?

For this action, the EPA estimated the cost of installing additional air pollution control devices in order to comply with the February 9, 2024, proposed emission limits. This includes both the capital costs of the initial installation and subsequent operation and maintenance costs. The EPA lacks the information necessary to independently assess the downtime loss of production due to capital improvements or deferred maintenance that would be associated with these controls for each affected facility. The assumed equipment life of the recommended controls for this NESHAP is twenty years. This default equipment life is based on information in the EPA Air Pollution Control Cost Manual. To assess the potential economic impacts, the expected annual cost was compared to the total sales revenue for the ultimate owners of affected facilities. For this rule, the expected annual cost is $4,900,0000 (on average) for each facility, with an estimated nationwide annual cost of $166,000,000 per year in perpetuity. The 34 affected facilities are owned by 11 parent companies, and the total costs associated

with the final amendments to the rule are expected to be greater than 1 percent of annual sales revenue per ultimate owner.

Because the total costs associated with the proposed amendments are expected to be greater than 1 percent of annual sales revenue per owner in the Lime Manufacturing source category, there are economic impacts from these proposed amendments on the 3 affected facilities that are owned by 2 small entities. Refer to section VI.C. of this preamble for a detailed description of the small business outreach and regulatory flexibility analysis performed in conjunction with this rule.

The EPA predicts that the affected sources in the Lime Manufacturing source category will be able to pass on some of their compliance costs to their customers. International trade of lime products is limited and there are no readily available cost-competitive substitutes for lime.

The economic analysis indicates that, under the final amendments on an annual basis, domestic lime production is estimated to decline by 212,000 metric tons (1.4 percent), imports are estimated to increase by 37,000 metric tons (11.5 percent), and exports are estimated to decline by 22,000 metric tons (6.6 percent), resulting in an estimated net decline in the quantity of lime distributed to the domestic market by about 164,000 metric tons (1.0 percent). While the compliance costs are expected to have effects on the lime market, the impact estimates suggest that affected sources are not likely to face severe competition from foreign lime producers or from substitutes for their product. The magnitude of the impact estimates do not suggest that the compliance costs are likely to induce any changes to the market structure for lime through changes such as diversification or consolidation.

Information on our cost impact estimates on the sources in the Lime Manufacturing source category is available in the document titled, “Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants,” which is included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

E. What are the benefits?

The EPA did not monetize the benefits from the estimated emission reductions of HAP associated with this final action. The EPA currently does not have sufficient methods to monetize benefits associated with HAP reductions, and risk reductions for this rulemaking. However, we estimate that the final rule amendments would reduce emissions by 893 tons per year and thus lower risk of serious adverse health effects (such as cancer and neurodevelopmental toxicity) in communities near lime manufacturing plants. These unquantified benefits would be particularly impactful to pregnant women, infants and children in these communities, since these life stages are especially susceptible to exposures to chemicals such as carcinogens and neurodevelopmental toxicants. It is reasonable to expect that the emissions reductions from this rule would reduce the incidence of adverse effects among the exposed populations. Monetization of the benefits of reductions in cancer incidences requires several important inputs, including central estimates of cancer risks, estimates of exposure to carcinogenic HAP, and estimates of the value of an avoided case of cancer (fatal and non-fatal). We expect these emissions reductions to have beneficial effects on air quality and public health for populations exposed to emissions from lime manufacturing facilities. Due to methodology and data limitations, we did not attempt to monetize the health benefits of reductions in HAP in this analysis. We have determined that quantification of those benefits cannot be accomplished for this final rule. Instead, we are providing a qualitative discussion of the health effects associated with reductions in HAP emitted from sources subject to control under the final action.

Information on our qualitative discussion of the health effects associated with HAP emitted from sources in the Lime Manufacturing source category is available in the document titled, "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants," which is included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

F. What analysis of environmental justice did we conduct?

For purposes of analyzing regulatory impacts, the EPA relies upon its June 2016 "Technical Guidance for Assessing Environmental Justice in Regulatory Analysis," which provides recommendations that encourage analysts to conduct the highest quality analysis feasible, recognizing that data limitations, time, resource constraints, and analytical challenges will vary by media and circumstance. The Technical Guidance states that a regulatory action may involve potential EJ concerns if it could: (1) Create new disproportionate impacts on communities with EJ concerns; (2) exacerbate existing disproportionate impacts on communities with EJ concerns; or (3) present opportunities to address existing disproportionate impacts on communities with EJ concerns through this action under development.

The EPA's EJ technical guidance states that "[t]he analysis of potential EJ concerns for regulatory actions should address 3 questions: (A) Are there potential EJ concerns associated with environmental stressors affected by the regulatory action for population groups of concern in the baseline? (B) Are there potential EJ concerns associated with environmental stressors affected by the regulatory action for population groups of concern for the regulatory option(s) under consideration? (C) For the regulatory option(s) under consideration, are potential EJ concerns created or mitigated compared to the baseline?"[5]

The environmental justice analysis is presented for the purpose of providing the public with as full as possible an understanding of the potential impacts of this final action. The EPA notes that analysis of such impacts is distinct from the determinations finalized in this action under CAA section 112, which are based solely on the statutory factors the EPA is required to consider under those sections.

[5] " Technical Guidance for Assessing Environmental Justice in Regulatory Analysis," U.S. EPA, June 2016. Quote is from Section 3 – Key Analytic Considerations, page 11. *https://www.epa.gov/environmentaljustice/technical-guidance-assessing-environmental-justice-regulatory-analysis*.

To examine the potential for any EJ issues that might be associated with lime manufacturing facilities, we performed a proximity demographic analysis, which is an assessment of individual demographic groups of the populations living within 5 km (~3.1 miles) and 50 km (~31 miles) of the facilities. The EPA then compared the data from this analysis to the national average for each of the demographic groups. In this preamble, we focus on the proximity results for the populations living within 5 km (~3.1 miles) of the facilities. The results of this proximity analysis for populations living within 50 km are included in the technical document titled, *Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Facilities*, which is available in the docket for this action.

The results (see table 8) show that for populations within 5 km of the 34 lime manufacturing facilities, the following demographic groups were above the national average: Hispanic/Latino (37 percent versus 19 percent nationally), linguistically isolated households (21 percent versus 5 percent nationally), people living below the poverty level (27 percent versus 13 percent nationally), and people without a high school diploma (17 percent versus 12 percent nationally). A summary of the proximity demographic assessment performed for the major source lime manufacturing facilities is included as table 8. The methodology and the results of the demographic analysis are presented in the report, *Analysis of Demographic Factors for Populations Living Near Lime Manufacturing Facilities*, available in this docket for this action (Docket ID No. EPA-HQ-OAR-2017-0015).

Table 8. Proximity Demographic Assessment Results for Major Source Lime Manufacturing Facilities

Demographic Group	Nationwide	Population within 5 km of Facilities
Total Population	328,016,242	473,343
Race and Ethnicity by Percent		
White	60 percent	50 percent
Black	12 percent	9 percent
American Indian and Alaska Native	0.7 percent	0.9 percent
Hispanic or Latino (includes white and nonwhite)	19 percent	37 percent

Other and Multiracial	8 percent	3 percent
Income by Percent		
Below Poverty Level	13 percent	27 percent
Above Poverty Level	87 percent	73 percent
Education by Percent		
Over 25 and without a High School Diploma	12 percent	17 percent
Over 25 and with a High School Diploma	88 percent	83percent
Linguistically Isolated by Percent		
Linguistically Isolated	5 percent	21 percent

Notes:

- Nationwide population and demographic percentages are based on the Census' 2015-2019 American Community Survey 5-year block group averages and include Puerto Rico. Demographic percentages based on different averages may differ. The total population counts within 5 km of all facilities are based on the 2010 Decennial Census block populations.
- Minority population is the total population minus the white population.
- To avoid double counting, the "Hispanic or Latino" category is treated as a distinct demographic category for these analyses. A person is identified as one of five racial/ethnic categories above: White, Black, Native American, Other and Multiracial, or Hispanic/Latino. A person who identifies as Hispanic or Latino is counted as Hispanic/Latino for this analysis, regardless of what race this person may have also identified as in the Census.

The human health risk estimated for this source category for the July 24, 2020, RTR (85 FR 44960) was determined to be acceptable, and the standards were determined to provide an ample margin of safety to protect public health. Specifically, the maximum individual cancer risk was 1-in-1 million for actual emissions (2-in-1 million for allowable emissions) and the noncancer hazard indices for chronic exposure were well below 1 (0.04 for actual emissions, 0.05 for allowable emissions). The noncancer hazard quotient for acute exposure was 0.6, also below 1. The final revisions to the NESHAP subpart AAAAA will reduce emissions by 893 tons of HAP per year, and therefore, further improve human health exposures for the populations and individuals most exposed to this pollution, including communities with environmental justice concerns. The proposed changes will have beneficial effects on air quality and public health for populations exposed to emissions from lime manufacturing facilities.

G. What analysis of children's environmental health did we conduct?

In the July 24, 2020, final Lime Manufacturing NESHAP RTR (85 FR 44960), the EPA conducted a residual risk assessment and determined that risk from the Lime Manufacturing source category was acceptable, and the standards provided an ample margin of safety to protect public health. This action finalizes first-time emissions standards for HCl, mercury, organic HAP, and D/F. Specifically, compliance with the emission standards set in this final rule will result in a combined reduction of total HAP of 893 tons of HAP per year.

This action's health and risk assessments are protective of the most vulnerable populations, including children, due to how we determine exposure and through the health benchmarks that we use. Specifically, the risk assessments we perform assume a lifetime of exposure, in which populations are conservatively presumed to be exposed to airborne concentrations at their residence continuously, 24 hours per day for a 70-year lifetime, including childhood. With regards to children's potentially greater susceptibility to noncancer toxicants, the assessments rely on the EPA's (or comparable) hazard identification and dose-response values that have been developed to be protective for all subgroups of the general population, including children. For example, mercury exposure is of particular importance to children, infants, and the developing fetus given the developmental neurotoxicity of mercury. In addition, children may be more vulnerable to corrosive agents, such as HCl, than adults because of the relatively smaller diameter of their airways. Children may also be more vulnerable to gas exposure because of increased minute ventilation per kg and failure to evacuate an area promptly when exposed. For more information on the risk assessment methods, see the risk report for the 2020 RTR rule, which is available in the docket (Docket ID No. EPA–HQ–OAR–2017–0015).

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders*.

A. Executive Orders 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This final action is significant under E.O. 12866 Section 3(f)(1) as amended by E.O. 14094. Accordingly, the EPA has prepared a Regulatory Impact Analysis (RIA). Documentation of any changes made in response to the Executive Order 12866 review is available in the docket. The EPA prepared an economic analysis of the potential impacts associated with this action. This analysis is included in the document titled, "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants" and is also available in the docket (Docket ID No. EPA–HQ–OAR–2017–0015).

B. Paperwork Reduction Act (PRA)

The information collection activities in this final rule have been submitted for approval to the Office of Management and Budget (OMB) under the PRA. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 2072.11. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The final rule ICR describes changes to the reporting and recordkeeping requirements for the Lime Manufacturing Plants NESHAP associated with the incorporation of reporting and recordkeeping requirements associated with the new and existing source MACT standards for HCl, mercury, organic HAP, and D/F.

Respondents/affected entities: Owners or operators of lime manufacturing plants that are major sources, or that are located at, or are part of, major sources of HAP emissions, unless the lime manufacturing plant is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, sugar beet manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart AAAAA).

Estimated number of respondents: 34

Frequency of response: The frequency of responses varies depending on the burden item.

Total estimated burden: 8,392 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $1,190,000 (per year), includes $335,000 annualized capital or operation & maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the *Federal Register* and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

C. Regulatory Flexibility Act (RFA)

Pursuant to sections 603 and 609(b) of the RFA, the EPA prepared an initial regulatory flexibility analysis (IRFA) for the February 9, 2024, supplemental proposal and convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations from small entity representatives that potentially would be subject to the rule's requirements. Summaries of the IRFA and Panel recommendations are presented in the February 9, 2024, supplemental proposal (89 FR 9088).

As required by section 604 of the RFA, the EPA prepared a final regulatory flexibility analysis (FRFA) for this action. The FRFA addresses the issues raised by public comments on the IRFA for the proposed rule. The complete FRFA is available for review in the memorandum "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants," which is included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015) and is summarized here.

1. Statement of Need and Rule Objectives

This industry is regulated by the EPA because pollutants emitted from lime manufacturing facilities are considered to cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health. This action establishes standards for currently unregulated pollutants: hydrogen chloride, mercury, organic HAP, and dioxin/furans. The decision in *Louisiana Environmental Action Network* v. *EPA*, 955 F.3d 1088 (D.C. Cir. 2020) concluded that the EPA is required to address regulatory gaps (*i.e.,* "gap-filling") when conducting NESHAP reviews.

2. Significant Issues Raised by the Public Comments in Response to the Initial Regulatory Flexibility Analysis (IRFA) and EPA Response

While the EPA did not receive any comments specifically in response to the IRFA, we did receive comments from the Office of Advocacy within the Small Business Administration (SBA), and a summary of the major comments and our responses is provided in the next section. The issues raised by SBA were also reflected in comments from small businesses and organizations with small business interests.

3. SBA Office of Advocacy Comments and EPA Response

The SBA's Office of Advocacy (hereafter referred to as "Advocacy") provided substantive comments on the January 5, 2023, Proposal and the February 9, 2024, Supplemental Proposal. Advocacy stated that while the amendments contain many positive recommendations from the 2023 SBAR panel conducted on EPA's proposed changes to the NESHAP for lime manufacturing plants, they recommend additional refinements.

In response to Advocacy's comments, the EPA recognizes the impacts the emission standards will have on the industry and specifically to small businesses. The EPA has incorporated regulatory flexibilities into the final rule where warranted to address the impacts on small businesses in the source category. These flexibilities include subcategorization of HCl emission limits, an IQV factor for

mercury, and an aggregated organic HAP emission limit. The EPA has worked with the lime manufacturing industry, and with the small businesses within the source category, to ensure the emission standards being finalized are accurate and representative of lime manufacturing operations. We disagree with Advocacy about setting health-based standards for HCl for reasons discussed in section III.A of this preamble. Additionally, we disagree with Advocacy that the EPA does not have enough information to set D/F emission standards, as discussed in section III.D of this preamble.

More detailed responses to Advocacy's comments can be found in the document, *Summary of Public Comments and Responses for National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants Amendments,* available in the docket for this rulemaking.

4. Estimate of the Number of Small Entities to Which the Final Rule Applies

For purposes of assessing the impacts of this rule on small entities, a small entity is defined as a small business in the lime manufacturing industry whose parent company has revenues or numbers of employees below the SBA Size Standards for the relevant NAICS code. A complete list of those NAICS codes and SBA Size Standards is available in section 6 of the document titled, "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants". The EPA estimates there are 34 affected facilities owned by 11 different parent companies. Two of the ultimate parent companies owning affected facilities are small entities. These small entities operate three facilities with a total of five kilns. They represent less than 5 percent of the total production capacity of the source category.

5. Projected Reporting, Recordkeeping and Other Compliance Requirements of the Final Rule

Under the rule requirements, small entities will be required to comply with the four emission standards in the final rule, which may require the use of one or more control devices new to the small entity. Small entities will also need to demonstrate compliance with the emission standards through the use of periodic performance testing and parametric monitoring. See section 6 of the document titled,

"Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants" for more information on the characterization of the impacts under the rule.

6. Steps Taken To Minimize Economic Impact to Small Entities

a. Small Business Advocacy Review Panel

As required by section 609(b) of the RFA, the EPA convened a Small Business Advocacy Review (SBAR) Panel to obtain advice and recommendations from small entity representatives (SERs) that potentially would be subject to the rule's requirements. On July 21, 2023, the EPA's Small Business Advocacy Chairperson convened the Panel. In light of the SERs' feedback and comments, the Panel considered the regulatory flexibility issues and elements of an IRFA specified by RFA/Small Business Regulatory Enforcement and Fairness Act and developed the findings and discussion summarized in the SBAR Panel Report. The report was finalized on November 6, 2023, and transmitted to the EPA Administrator for consideration. A copy of the full SBAR Panel Report is available in the rulemaking docket.

b. Alternatives Considered

The SBAR Panel recommended several flexibilities including the consideration of health-based standards for HCl, an IQV for mercury, an aggregated organic HAP emission standard, retaining subcategorization for HCl numeric emissions limits, and work practice standards for D/F in a place of a numeric limit. The EPA included some of these flexibilities as a part of this final rule.

As discussed in section III.A of this preamble, the EPA is not considering a health-based standard for HCl. The final rule does include an IQV factor for mercury and an aggregate organic HAP emission limit, as discussed in sections III.B and III.C of this preamble. However, as discussed in section III.D of this preamble, the EPA did not receive data supporting a work practice standard for D/F, and, therefore, the EPA is not finalizing a work practice standard for D/F in this action.

In addition, the EPA is preparing a Small Entity Compliance Guide to help small entities comply with this rule. The Small Entity Compliance Guide will be available on the same date as the date of publication of the final rule or as soon as possible after that date and will be available on the rule web page at: *https://www.epa.gov/stationary-sources-air-pollution/lime-manufacturing-plants-national-emission-standards-hazardous.*

D. Unfunded Mandates Reform Act (UMRA)

This action contains a Federal mandate that may result in expenditures of $183 million in 2023$ ($100 million in 1995$ adjusted for inflation using the GDP implicit price deflator) or more as described in UMRA, 2 U.S.C. 1531–1538, for the private sector in any one year. Accordingly, the EPA has prepared a written statement required under section 202 of UMRA. The statement is included in the document titled, "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants," included in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015). and briefly summarized here.

The EPA has concluded that this final rule may require expenditures of $100 million or more in any one year by the private sector. Such expenditures may include capital costs of purchasing and installing control technologies to meet the amended standards under the final rule. See section 6 of the document titled, "Regulatory Impact Analysis for the Final Amendments to the National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Plants" for more information on the characterization of the economic impacts, including capital cost inputs, under the rule.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have Tribal implications as specified in Executive Order 13175. The EPA does not know of any lime manufacturing facilities owned or operated by Indian Tribal governments. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: *Protection of Children from Environmental Health Risks and Safety Risks*

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explain why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is subject to Executive Order 13045 because it is a significant regulatory action under section 3(f)(1) of Executive Order 12866, and the EPA believes that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. For example, mercury exposure is of particular importance to children, infants, and the developing fetus given the developmental neurotoxicity of mercury. In addition, children may be more vulnerable to corrosive agents, such as HCl, than adults because of the relatively smaller diameter of their airways. Children may also be more vulnerable to gas exposure because of increased minute ventilation per kg and failure to evacuate an area promptly when exposed. Accordingly, we have evaluated the environmental health or safety effects of the air emissions from lime manufacturing on children.

The results of this evaluation are contained in the docket of this rulemaking (Docket ID No. EPA-HQ-OAR-2017-0015).

This action is preferred over other regulatory options analyzed because this action finalizes emission standards for 4 previously unregulated pollutants; therefore, the rule includes health benefits to children by reducing the level of HAP emissions emitted from the lime manufacturing process.

Furthermore, EPA's *Policy on Children's Health* also applies to this action. Information on how the Policy was applied is available under "Children's Environmental Health" in the Supplementary Information section of this preamble.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. In this final action, the EPA is setting emission standards for 4 previously unregulated pollutants. This does not impact energy supply, distribution, or use.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. Therefore, the EPA conducted searches for the Lime Manufacturing NESHAP through the Enhanced National Standards Systems Network (NSSN) Database managed by the American National Standards Institute (ANSI). We also conducted a review of voluntary consensus standards (VCS) organizations and accessed and searched their databases. We conducted searches for EPA Methods 23, 25A, 29, 30B, 320, and 321. During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's referenced method, the EPA ordered a copy of the standard and reviewed it as a potential equivalent method. We reviewed all potential standards to determine the practicality of the VCS for this rule. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering, and policy equivalence to procedures in the EPA referenced methods. The EPA may reconsider determinations of impracticality when additional information is available for any particular VCS.

Two VCS were identified as acceptable alternatives to the EPA test methods for this final rule. The VCS ASTM D6784-16, "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total

Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)" is an acceptable alternative to EPA Method 29 (portion for mercury only) as a method for measuring mercury. The VCS ASTM D6348-12e1, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform (FTIR) Spectroscopy" is an acceptable alternative to EPA Method 320 with certain conditions. Detailed information on the VCS search and determination can be found in the memorandum, "Voluntary Consensus Standard Results for National Emission Standards for Hazardous Air Pollutants: Lime Manufacturing Technology Review", which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2017-0015).

The EPA is incorporating by reference the VCS ASTM D6348-12 (Reapproved 2020), "Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy" as an acceptable alternative to EPA Method 320 (referenced in NESHAP subparts F and U) with caveats requiring inclusion of selected annexes to the standard as mandatory. This ASTM procedure uses an extractive sampling system that routes stationary source effluent to an FTIR spectrometer for the identification and quantification of gaseous compounds. We note that we proposed VCS ASTM D6348-12e1 as an alternative to EPA Method 320; however, since proposal, a newer version of the method (VCS ASTM D6348-12 (Reapproved 2020)) is now available, and we have determined it to be equivalent to EPA Method 320 with caveats. The VCS ASTM D6348-12 (Reapproved 2020) method is an extractive FTIR Spectroscopy-based field test method and is used to quantify gas phase concentrations of multiple target compounds in emission streams from stationary sources. When using ASTM D6348-12 (Reapproved 2020), the following conditions must be met: (1) Annexes Al through A8 to ASTM D6348-12 (Reapproved 2020) are mandatory; and (2) in ASTM D6348-12 (Reapproved 2020) Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). For the test data to be acceptable for a compound, %R must be $70\% \geq R \leq 130\%$. If the %R value does not meet this criterion for a target compound, the

test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.,* the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

Reported Results = ((Measured Concentration in Stack))/(%R) x 100.

The EPA is incorporating by reference the VCS ASTM D6784-16), "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)," as an acceptable alternative to EPA Method 29 (portion for mercury only) as a method for measuring elemental, oxidized, particle-bound, and total mercury concentrations ranging from approximately 0.5 to 100 micrograms per normal cubic meter. This test method describes equipment and procedures for obtaining samples from effluent ducts and stacks, equipment and procedures for laboratory analysis, and procedures for calculating results. VCS ASTM D6784-16 allows for additional flexibility in the sampling and analytical procedures for the earlier version of the same standard VCS ASTM D6784-02 (Reapproved 2008). ASTM D6784–16 allows for the use of either an EPA Method 17 sampling configuration with a fixed (single) point where the flue gas is not stratified, or an EPA Method 5 sampling configuration with a multi-point traverse. These methods are available at ASTM International, 1850 M Street NW, Suite 1030, Washington, DC 20036. See *https://www.astm.org*/. The standards are available to everyone at a cost determined by ASTM. The costs of obtaining these methods are not a significant financial burden, making the methods reasonably available.

Additionally, the EPA is incorporating by reference "Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds" (EPA/100/R-10/005 December 2010), which is the source of the toxicity equivalence factors (TEF) for dioxins and furans used in calculating the toxic equivalence quotient of

the proposed dioxin and furan standard. This document describes the EPA's updated approach for evaluating the human health risks from exposures to environmental media containing dioxin-like compounds. The EPA recommends that the TEF methodology, a component mixture method, be used to evaluate human health risks posed by these mixtures, using TCDD as the index chemical. The EPA recommends the use of the consensus TEF values for 2,3,7,8-tetrachlorodibenzo-p-dioxin and dioxin-like compounds published in 2005 by the World Health Organization. This is the international method of expressing toxicity equivalents for dioxins/furans where a recommended TEF is multiplied by each individual compound's (congener) emission concentration to calculate the 2,3,7,8-Tetrachlorodibenzo-p-dioxin toxicity equivalents (TEQ). To estimate risk associated with the mixture, the dose-response function for the index chemical is evaluated at this sum, which is an estimate of the total index chemical equivalent dose for the mixture components being considered. The document is available on the EPA website, *https://www.epa.gov/risk/documents-recommended-toxicity-equivalency-factors-human-health-risk-assessments-dioxin-and*.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All

The EPA anticipates that the human health or environmental conditions that exist prior to this action result in or have the potential to result in disproportionate and adverse human health or environmental effects on communities with environmental justice (EJ) concerns. The assessment of populations in close proximity of lime manufacturing facilities shows Hispanic and linguistically isolated groups are higher than the national average (see section V.F. of the preamble). The higher percentages are driven by 4 of the 34 facilities in the source category.

The EPA anticipates this action is likely to reduce existing disproportionate and adverse effects on communities with EJ concerns. The EPA is finalizing MACT standards for HCl, mercury, organic

HAP, and D/F. The EPA expects that the 4 facilities would have to implement control measures to reduce emissions to comply with the MACT standards and that HAP exposures for the people living near these facilities (including those communities with EJ concerns) would decrease.

The information supporting this Executive Order review is contained in section V.F of the preamble.

K. Congressional Review Act (CRA)

This action is subject to the CRA., and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action meets the criteria set forth in 5 U.S.C. 804(2).

This document is a prepublication version, signed by EPA Administrator, Michael S. Regan on 6/28/2024. We have taken steps to ensure the accuracy of this version, but it is not the official version.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Michael S. Regan,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is proposed to be amended as follows:

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 4701, *et seq*.

Subpart A—General Provisions

2. Amend § 63.14 by revising paragraphs (i)(89), (105) and (o)(1) to read as follows:

§63.14 Incorporations by reference

* * * * *

(89) ASTM D6348–12 (Reapproved 2020), Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for §§ 63.109(a); 63.365(b); 63.509(a); 63.7322(d), (e), and (g), 63.7825(g) and (h); table 5 to subpart AAAAA.

* * * * *

(105) ASTM D6784–16, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), Approved March 1, 2016; IBR approved for §§ 63.1450(d); 63.7322(c); table 5 to subpart UUUUU; appendix A to subpart UUUUU; table 5 to subpart AAAAA; 63.9621.

* * * * *

(o) * * *

(1) EPA/100/R-10/005, Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds, December 2010, https://www.epa.gov/sites/default/files/2013-09/documents/tefs-for-dioxin-epa-00-r-10-005-

final.pdf, IBR approved for §§ 63.1450(f); 63.1459; table 2 to subpart QQQ; table 1 to subpart AAAAA. (Available at *https://www.epa.gov/sites/default/files/2013-09/documents/tefs-for-dioxin-epa-00-r-10-005-final.pdf*.)

* * * * *

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

3. Amend §63.7082 by:

a. Revising paragraph (b);

b. Redesignating paragraphs (c) through (j) as paragraphs (d) and (k);

c. Adding new paragraph (c); and.

d. Revising newly redesignated paragraph (f).

The revisions and addition read as follows:

§63.7082 What part of my plant does this subpart cover?

* * * * *

(b) For purposes of complying with the PM emissions limitations of this subpart, a new lime kiln is a lime kiln, and (if applicable) its associated lime cooler, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in §63.7081 at the time you began construction or reconstruction.

(c) For the purposes of complying with the HCl, mercury, organic HAP, and D/F emissions limitations of this subpart, a new lime kiln is a lime kiln (only) for which construction or reconstruction began after January 5, 2023, if you met the applicability criteria in §63.7081 at the time you began construction or reconstruction.

* * * * *

(f) An existing lime kiln is any lime kiln, and (when complying with PM emissions limitations) its associated lime cooler, that does not meet the definition of a new kiln of paragraph (b) and paragraph (c) of this section.

* * * * *

4. Amend §63.7083 by:

a. Revising paragraphs (a) and (b);

b. Redesignating paragraphs (c) through (e) as paragraphs (e) through (g);

c. Adding new paragraphs (c) and (d); and

d. Adding paragraphs (h)(1) and (h)(2).

The revisions and additions read as follows:

§63.7083 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before January 5, 2004, you must comply with the PM emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004, except as noted in paragraphs (g)(1) and (2) of this section.

(2) If you start up your affected source after January 5, 2004, then you must comply with the PM emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup, except as noted in paragraphs (g)(1) and (2) of this section.

(b) If you have an existing affected source you must comply with the applicable PM emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007, except as noted in paragraphs (g)(1) and (2) of this section.

(c) If you start up your affected source after **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, then you must comply with all emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup, except as noted in paragraphs (h)(1) and (2) of this section.

(d) If you have an existing affected source you must comply with all applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than **[INSERT DATE 3 YEARS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, except as noted in paragraphs (h)(1) and (2) of this section.

* * * * *

(h)(1) If your affected source commenced construction or reconstruction on or before January 5, 2023, then the compliance date for HCl, mercury, total organic HAP, and D/F emissions limitations is [**INSERT DATE 3 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**].

(2) If your affected source commenced construction or reconstruction after January 5, 2023, then the compliance date for HCl, mercury, total organic HAP, and D/F emissions limitations is **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or the date of initial startup, whichever is later.

5. Amend §63.7090 by adding paragraph (d) to read as follows:

§63.7090 What emission limitations must I meet?

* * * * *

(d) For those LMP using emissions averaging for either HCl emission limits or mercury emission limits in accordance with the procedures in §63.7114(b) and (c), must not exceed the applicable emission limits in table 9 to this subpart.

6. Amend §63.7100 (a) to read as follows:

§63.7100 What are my general requirements for complying with this subpart?

(a) Prior to the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the applicable emission limitations (including operating limits) at all times. You may operate outside of the established operating parameter limit(s) during performance tests in order to establish new operating limits.

* * * * *

7. Amend §63.7110 by adding paragraph (f) to read as follows:

§63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

* * * * *

(f) If your affected source commenced construction or reconstruction before January 5, 2023, you must demonstrate initial compliance with the emission limitation in in this subpart no later than **[INSERT DATE 3 YEARS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, or within 180 calendar days after startup of the source, whichever is later, according to §§63.7(a)(2)(ix) and 63.7114.

8. Amend §63.7112 by:

a. Revising paragraph (b), (c) and (d);

b. Revising paragraph (j)(1); and

c. Adding paragraphs (n) and (o).

The revisions and additions read as follows:

§63.7112 What performance tests, design evaluations, and other procedures must I use?

* * * * *

(b) Prior to the relevant compliance date for your source as specified in §63.7083(e), each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions specified in table 5 to this subpart. Beginning **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, each performance test must include the methods specified in rows 19-24 of table 5 to this subpart. On and after the relevant compliance date for your source as specified in §63.7083(e), each performance test must be conducted based on representative performance (i.e., performance based on normal operating conditions) of the affected source and under the specific conditions in table 5 to this subpart. Representative conditions exclude periods of startup and shutdown. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. Performance tests conducted in accordance with table 5 are not required to be performed at the same time.

* * * * *

(d) Except for opacity and VE observations, you must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour or as specified in table 5 to this subpart.

* * * * *

(j) * * *

(1) Continuously record the parameter during the performance test and include the parameter record(s) in the performance test report.

* * * * *

(n) The emission rate of mercury and hydrogen chloride (HCl) from each lime kiln (and each lime cooler as applicable) must be computed for each run using equation 4 to this paragraph (n):

Equation 4 to paragraph (n)

$$E = \frac{(C_k Q_k + C_c Q_c)}{KP} \qquad (Eq. 4)$$

Where:

E = Emission rate of mercury, pounds per thousand tons (lb/MMton) of lime produced or HCl pounds per ton (lb/ton) of lime produced.

C_k = Concentration in the kiln effluent of mercury, micrograms/dry standard cubic feet (µg/dscf) or HCl, parts per million by volume on a dry basis (ppmvd).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration in the cooler effluent of mercury, µg/dscf or HCl, ppmvd. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Lime production rate, tons per hour (ton/hr).

K = Conversion factor, for mercury, 4.4×10^8 micrograms per pound (µg/lb) for HCL 1.09×10^7 ppmvd HCl per lb/dscf HCl.

(o) The concentration of total hydrocarbons and dioxins/furans shall be correct to 7 percent oxygen using equation 5 to this paragraph (o):

Equation 5 to paragraph (o)

$$C_{7\%} = C_{unc} * \frac{13.9}{(20.9 - C_{O2})} \qquad (Eq. 5)$$

Where:

$C_{7\%}$ = concentration of total hydrocarbons ppmv as propane on a dry basis or dioxins/furans in ng/dscm corrected to 7 percent oxygen.

C_{unc} = uncorrected total hydrocarbon concentration, ppmv as propane on a dry basis basis or dioxins/furans in ng/dscm.

C_{O2} = concentration of oxygen (percent).

9. Amend §63.7113 by adding paragraphs (h) and (i) to read as follows:

§63.7113 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(h) For each mass flow rate monitor used for measuring the dry sorbent injection rate (*e.g.*, sorbent, activated carbon, etc.) you must meet the requirements of (h)(1) through (3) of this section.

(1) Locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Install and calibrate the device in accordance with manufacturer's procedures and specifications.

(3) At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.

(i) For each temperature monitoring device installed to monitor the temperature of a thermal oxidizer, you must meet the requirements of (i)(1) through (3) of this section.

(1) Install the temperature monitoring device in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.

(2) The temperature measurement system must be capable of measuring the temperature over a range that extends at least 20 percent beyond the normal expected operating range and has an accuracy of ±1 percent of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit) whichever is

greater. The data recording system associated with affected CPMS must have a resolution that is equal to or better than one-half of the required system accuracy.

(3) The calibration reference for the temperature measurement must be a National Institute of Standards and Technology (NIST) calibrated reference thermocouple-potentiometer system, NIST traceable certified reference thermocouple, or alternate reference, subject to approval by the Administrator.

(4) The calibration of all thermocouples and other temperature sensors must be verified at least once every three months.

10. Amend §63.7114 by:

a. Redesignating paragraphs (b) and (c) as paragraphs (d) and (e); and

b. Adding new paragraphs (b) and (c).

The additions read as follows:

§63.7114 How do I demonstrate initial compliance with the emission limitations standard?

* * * * *

(b) For those LMP that comply with either the HCl emissions limit or the mercury emission limit using emissions averaging, the average HCl or mercury emissions determined according to the procedures in §63.7112(n), must not exceed the applicable emission limit in table 9 to this subpart.

(c) For those LMP that comply with either the HCl emissions limit or the mercury emission limit using emissions averaging, you must comply with the requirements in paragraphs (c)(1) through (4) of this section.

(1) You must complete the stack testing required in paragraph §63.7112(n) of this section for all lime kilns you wish to include in the emission average before submitting the implementation plan required in paragraph (c)(2) of this section.

(2) You must develop and submit to the applicable regulatory authority for review and approval, an implementation plan for emission averaging no later than 180 days before the date you intend to demonstrate compliance using the emission averaging option. You must include the information contained in paragraphs (c)(2)(i) through (iii) of this section in your implementation plan.

(i) Identification of all lime kilns in the averaging group, including the lime kiln subcategory, type of lime produced, typical stone production rate, control technology installed, and types of fuel(s) that will be burned.

(ii) The HCl or mercury emission rate for each lime kiln for each of the fuels identified in paragraph (c)(2)(i) of this section.

(iii) The date on which you are requesting emission averaging to commence.

(3) The regulatory authority shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all the information specified in paragraph (c)(2) of this section, and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable regulatory authority shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Averaging between emissions of differing pollutants,

(ii) Averaging that includes lime kilns constructed or reconstructed on or after **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, or

(iii) Averaging between lime kilns located at different facilities.

(iv) Averaging between lime kilns in different subcategories.

* * * * *

11. Amend §63.7121 by adding paragraph (g) to read as follows:

§63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

* * * * *

(g) If you elect to comply with either the HCl emission limit or the mercury emission limit in table 9 to this subpart using emissions averaging in accordance with an implementation plan approved under the provisions in §63.7114(c) you must comply with the requirements in paragraphs (g)(1) through (8) of this section.

(1) For lime kilns included in the emissions averaging group that are equipped with dry sorbent injection (DSI) or ACI systems, you must comply with the requirements in §63.7113(h).

(2) For kilns included in the emissions averaging group that use a control device or method other than DSI or ACI, you must comply with your site-specific monitoring plan of this section.in accordance with the requirements of §63.7100(d).

(3) Calculate the monthly production-weighted average emission rate using the HCl or mercury emission rate determined during the last performance test and the actual production data for each kiln included in the emissions averaging option, as shown in equation 1 to this paragraph (g)(3).

Equation 1 to paragraph (g)(3)

$$E_g = \frac{\sum_{k=1}^{n}(E_k X\ P_k)}{\sum_{k=1}^{n}(P_k)} \quad (Eq.1)$$

Where:

E_g = Monthly production-weighted average emission rate for month "g" for the group of kilns,

E_k = Average emission rate for kilns "k", as determined during the last compliance stack test,

P_k = Total monthly production of lime produced for kilns "k", and

n = Number of kilns in the averaging group.

(4) Until 12 monthly weighted average emission rates have been accumulated, the monthly weighted average emissions rate, calculated as shown in paragraph (g)(4) of this section, must not exceed the emission limit in table 9 to this subpart in any calendar month.

(5) After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, you must use equation 2 to this paragraph (g)(5) to calculate the 12-month rolling average of the monthly weighted average emission rates for the current month and the previous 11 months. The 12-month rolling weighted average emissions rate for the kilns included in the group must not exceed the emission limits in table 9 to this subpart.

Equation 2 to paragraph (g)(5)

$$E_{avg} = \frac{\sum_{i=1}^{12} E_i}{12} \qquad \textit{(Eq. 2)}$$

Where:

E_{avg} = 12-month rolling average emission rate.

E_i = Monthly weighted average for month "i" calculated as shown in equation 1 to paragraph (g)(3)of this section.

(6) For those kilns that produce multiple types of lime in the HCl subcategory (*e.g.*, high calcium quick lime and dolomitic quick lime) you must establish a kiln-specific emission limit using equation 3 to paragraph (g)(6).

Equation 3 to paragraph (g)(6)

$$EL_K = \left(P_{QL}\ x\ EL_{QL}\right) + \left(P_{DL}\ x\ EL_{DL}\right) \qquad \text{(Eq. 3)}$$

Where,

EL_K = kiln-specific allowable emission limit, lb/yr

P_{QL} = Actual 12-month production of high calcium quick lime, ton lime produced/yr

EL_{QL} =Emission limit for high calcium quick lime taken from Table 9, lb HCl/ton lime produced

P_{DL} = Actual 12-month production of dolomitic quick lime, ton lime produced/yr

EL_{DL} = Emission limit for dolomitic quick lime taken from Table 9, lb HCl/ton lime produced

(7) For those kilns that produce multiple types of lime in the HCl subcategory, after the close of each calendar month compliance with the kiln-specific emission limit developed in §63.7121(g) would be calculated using equation 4 of paragraph (g)(7).

Equation 4 to paragraph (g)(7)

$$E_K = (P_{QL}\, x\, TER_{QL}) + (P_{DL}\, x\, TER_{DL}) \qquad \text{(Eq. 4)}$$

Where,

E_K = Average emission rate for kiln "k", as determined during the last compliance stack test, lb HCl/ton production

P_{QL} = Actual 12-month production of high calcium quick lime, ton lime produced/yr

E_{QL} = Average emission rate for kiln "k" while producing high calcium quick lime, as determined during the last compliance stack test

P_{DL} = Actual 12-month production of dolomitic quick lime, ton lime produced/yr

E_{DL} = Average emission rate for kiln "k" while producing dolomitic quick lime, as determined during the last compliance stack test, lb HCl/ton production

(8) For those kilns that produce multiple types of lime in the HCl subcategory, compliance using the emissions averaging provisions is demonstrated when E_K, as determined using equation 10, is less than E_{LK}, as determined using equation 3 to paragraph (g)(5) of this section.

10. Amend §63.7131 by revising paragraphs (d)(3), (e)(12), (g), and (h)(3) to read as follows:

§63.7131 What reports must I submit and when?

* * * * *

(d) * * *

(3) An estimate of the quantity of each regulated pollutant emitted over a non-opacity or VE emission limit, and a description of the method used to estimate the emissions.

(e) * * *

(12) An estimate of the quantity of each regulated pollutant emitted over a non-opacity or VE emission limit, and a description of the method used to estimate the emissions.

* * * * *

(g) If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). You must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as Confidential Business Information (CBI). Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report, you must submit a complete file, including information claimed to be CBI, to the EPA following the procedures in this paragraph (g). Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be

protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the Office of Air Quality Planning and Standards (OAQPS) CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and be flagged to the attention of the Lime Manufacturing Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Lime Manufacturing Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(h) * * *

(3) *Confidential business information (CBI)*. (i) The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information submitted under paragraph (a)(1) or (2) of this section, you must submit a complete file, including information claimed to be CBI, to the EPA.

(ii) The file must be generated using the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website.

(iii) Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

(iv) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings and be flagged to the attention of the Group Leader, Measurement Policy Group. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

(v) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Group Leader, Measurement Policy Group. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(vi) All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(vii) You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described in paragraphs (h)(1) and (2) of this section.

* * * * *

§63.7142 [Amended]

11. Amend §63.7142 by removing paragraph (a)(4).

12. Amend §63.7143 by adding, in alphabetical order, definitions for "Dry sorbent injection (DSI)", "Lime produced", "TEQ", and "Total Organic HAP"; and by removing the definition for "Lime Product".

The additions read as follows:

§63.7143 What definitions apply to this subpart?

* * * * *

Dry sorbent injection (DSI) means an add-on air pollution control system in which sorbent (e.g., conventional activated carbon, brominated activated carbon, Trona, hydrated lime, sodium carbonate, etc.) is injected into the flue gas steam upstream of a PM control device to react with and neutralize acid gases (such as SO_2 and HCl) or mercury in the exhaust stream forming a dry powder material that may be removed in a primary or secondary PM control device.

* * * * *

Lime produced refers to the production of lime from the lime kiln consisting of high-calcium quick lime, dolomitic quick lime and/or dead burned dolomitic lime.

* * * * *

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in EPA/100/R-10/005, "*Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds*", December 2010 (incorporated by reference—see §63.14). The TEFs used to determine the dioxin and furan TEQs are listed in Table 11 of this subpart.

Total Organic HAP means, for the purposes of this subpart, the sum of the concentrations of compounds of formaldehyde, acetaldehyde, toluene, benzene, m-xylene, p-xylene, o-xylene, styrene, ethyl benzene, and naphthalene as measured by EPA Test Method 320 or Method 18 of appendix A to this part or ASTM D6348–03[1] or a combination of these methods, as appropriate. If measurement

results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating the total organic HAP value. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 18 fractions) may include a combination of method detection level data and analytical data reported above the method detection level. The owner or operator of an affected source may request the use of other test methods to make this determination under paragraphs § 63.7(e)(2)(ii) and (f) of this part.

* * * * *

15. Revise tables 1 through 6, 8, and 9 to subpart AAAAA to read as follows:

Table 1 to Subpart AAAAA of Part 63—Emission Limits

As required in §63.7090(a), you must meet each emission limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See table 2 to this subpart for emission limits for kilns and coolers during startup and shutdown).

For . . .	**You must meet the following emission limit**
1. All existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
2. All existing lime kilns and their associated lime coolers that have a wet scrubber, where the scrubber itself was installed and operating prior to January 5, 2004	PM emissions must not exceed 0.60 lb/tsf. If, at any time after January 5, 2004, the kiln changes to a dry control system, then the PM emission limit in item 1 of this table 1 applies, and the kiln is hereafter ineligible for the PM emission limit in item 2 of this table 1 regardless of the method of PM control.
3. All new lime kilns and their associated lime coolers	PM emissions must not exceed 0.10 lb/tsf.

4. All existing and new lime kilns and their associated coolers at your LMP, and you choose to average PM emissions, except that any kiln that is allowed to meet the 0.60 lb/tsf PM emission limit is ineligible for averaging	Weighted average PM emissions calculated according to Eq. 2 to §63.7112(f)(1) must not exceed 0.12 lb/tsf (if you are averaging only existing kilns) or 0.10 lb/tsf (if you are averaging only new kilns). If you are averaging existing and new kilns, your weighted average PM emissions must not exceed the weighted average emission limit calculated according to Eq. 3 to §63.7112(g), except that no new kiln and its associated cooler considered alone may exceed an average PM emissions limit of 0.10 lb/tsf.
5. New straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 1.7 lb/ton of lime produced.
6. Existing straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 2.3 lb/ton of lime produced.
7. New straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.015 lb/ton of lime produced.
8. Existing straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.52 lb/ton of lime produced.
9. All preheater rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 0.39 lb/ton of lime produced.
10. All preheater rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.096 lb/ton of lime produced.
11. All vertical lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 0.39 lb/ton of lime produced.
12. All vertical lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.021 lb/ton of lime produced.

13. All new lime kilns and their associated coolers	Mercury emissions must not exceed 27 lb/MMton of lime produced.
14. All existing lime kilns and their associated coolers	Mercury emissions must not exceed 34 lb/MMton of lime produced.
15. All lime kilns and their associated coolers	Total Organic HAP emissions must not exceed 2.6 ppmvd @ 7% O_2.
16. All lime kilns and their associated coolers	D/F emissions must not exceed 0.037 ng/dscm (TEQ)[1] @ 7% O_2.
17. Stack emissions from all PSH operations at a new or existing affected source	PM emissions must not exceed 0.05 grams per dry standard cubic meter (g/dscm).
18. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device	Emissions must not exceed 7 percent opacity.
19. Fugitive emissions from all PSH operations at a new or existing affected source, except as provided by item 8 of this Table 1	Emissions must not exceed 10 percent opacity.
20. All PSH operations at a new or existing affected source enclosed in a building	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations in items 5 through 7 of this Table 1, or the building must comply with the following: There must be no VE from the building, except from a vent; and vent emissions must not exceed the stack emissions limitations in items 5 and 6 of this Table 1.
21. Each FF that controls emissions from only an individual, enclosed storage bin	Emissions must not exceed 7 percent opacity.
22. Each set of multiple storage bins at a new or existing affected source, with combined stack emissions	You must comply with the emission limits in items 5 and 6 of this Table 1.

[1] Determined using the toxic equivalency factors listed in Table 2 of Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (incorporated by reference, see § 63.14). When calculating TEQ, zero may be used for congeners that are below the estimated detection level (EDL).

Table 2 to Subpart AAAAA of Part 63—Startup and Shutdown Emission Limits for Kilns and Coolers

As required in §63.7090(b), on and after the relevant compliance date for your source as specified in §63.7083(e), you must meet each emission limit in the following table that applies to you.

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in §63.7112 . . .
1. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during each startup	Emissions must not exceed 15 percent opacity (based on startup period block average)	i. Installed, maintained, calibrated and operated a COMS as required by the general provisions of subpart A of this part and according to PS–1 of appendix B 40 CFR part 60, except as specified in §63.7113(g)(2);
		ii. Collected the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent.
2. All existing lime kilns and their associated coolers that have a wet scrubber during each startup	See item 2.b of Table 3 of subpart AAAAA for emission limit	See item 1 of table 6 to this subpart for requirements for demonstrating compliance.
3. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during shutdown	Emissions must not exceed 15 percent opacity (based on 6-minute average opacity for any 6-minute block period does not exceed 15 percent)	i. Installed, maintained, calibrated and operated a COMS as required by the general provisions of subpart A of this and according to PS–1 of appendix B 40 CFR part 60, except as specified in §63.7113(g)(2);
		ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
4. All existing lime kilns and their associated coolers that have a wet scrubber during shutdown	See item 2.b of Table 3 of subpart AAAAA for emission limit	See item 1 of table 6 to this subpart for requirements for demonstrating compliance.

5. All new and existing lime kilns that use dry sorbent injection or carbon injection during startup and shutdown		When a lime kiln is in startup or shutdown (as defined in §63.7143), the Table 3 operating limits for sorbent and/or carbon injection do not apply, and the lime kiln operator shall ensure that sorbent or carbon injection is in operation until the unit is no longer in startup or shutdown. During startup and shutdown, the control device shall be operated in accordance with manufacturer's recommendations or by a site-specific operating procedure for startup and shutdown events.
6. All new and existing lime kilns that use a thermal oxidizer during startup and shutdown		6. When a lime kiln is in startup or shutdown (as defined in §63.7143), the Table 3 temperature limits for a thermal oxidizer do not apply and the lime kiln operator shall ensure that the thermal oxidizer is in operation until the unit is no longer in startup or shutdown. During startup and shutdown, the control device shall be operated in accordance with manufacturer's recommendations or by a site-specific operating procedure for startup and shutdown events.

Table 3 to Subpart AAAAA of Part 63—Operating Limits

As required in §63.7090(b), you must meet each operating limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See table 2 to this subpart for operating limits during startup and shutdown).

For . . .	**You must . . .**
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in §63.7113(d) through (f) and table 6 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in §63.7113(f) and (g) and table 6 to this subpart.
2. Each lime kiln equipped with a wet scrubber	a. Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the greater of the pressure

	drop operating limit established during the most recent performance test for PM and HCl; and
	b. Maintain the 3-hour block scrubbing liquid flow rate greater than or equal to the greater of the flow rate operating limit established during the most recent performance test for PM and HCl.
3. Each lime kiln equipped with an electrostatic precipitator	Install a PM detector and maintain and operate the ESP such that the PM detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period, and comply with §63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in §63.7113(g); and comply with the requirements in §63.7113(f) and table 6 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the greater of the pressure drop operating limit established during the performance test for PM and HCl; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the greater of the flow rate operating limit established during the performance test for PM and HCl.
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in §63.7100(d) and the corrective actions to be taken when required in table 6 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.
7. Each lime kiln equipped with dry sorbent injection	Maintain the 3-hour block dry sorbent flow rate greater than or equal to the flow rate operating limit established during the most recent performance test for HCl.
8. Each lime kiln equipped with a thermal oxidizer	Maintain the 3-hour block average combustion chamber temperature greater or equal to the greater of the combustion chamber operating limit established in the most recent performance test for total organic HAP and D/F.
9. Each lime kiln equipped with activated carbon injection	Maintain the 3-hour block activated carbon injection flow rate greater than or equal to the greater of the flow rate operating limit established during the most recent performance test for total organic HAP, D/F, and mercury.

Table 4 to Subpart AAAAA of Part 63—Initial Compliance With Emission Limits

As required in §63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.

For . . .	**For the following emission limit . . .**	**You have demonstrated initial compliance, if after following the requirements in §63.7112 . . .**
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers)	Emission limits as identified in Table 1, or a weighted average calculated according to Eq. 3 in §63.7112	The kiln outlet PM, HCl, mercury, and Total Organic HAP, and dioxins and furans emissions (and if applicable, summed with the separate cooler ~~PM~~ emissions), based on the PM emissions measured using Method 5 or 5D in appendix A-3 to part 60 of this chapter, HCl measured using Method 320 or 321 in appendix A of Part 63 of this chapter, mercury measured using Method 29 or 30B in appendix A-8 to part 60 of this chapter, and the stone feed rate measurement over the period of initial performance test and Total Organic HAP measured using Method 18 in appendix A-6 to part 60 of this chapter and/or Method 320 in appendix A of Part 63 of this chapter and dioxins and furans measured using Method 23 in appendix A-7 to part 60 of this chapter, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in §63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in §63.7113(g). If the kiln is equipped with a dry sorbent injection system, you have a record of the dry sorbent and/or carbon injection flow rate operating parameter over the 3-hour performance test during which emissions did not exceed the emissions

		limitation. If the kiln is equipped with a thermal oxidizer, you have a record of the combustion chamber operating temperature operating parameter over the 3-hour performance test during which emissions did not exceed the emissions limitation.
2. Stack emissions from all PHS operations at a new or existing affected source	PM emissions must not exceed 0.05 g/dscm	The outlet PM emissions, based on Method 5 or Method 17 in appendix A-3 and A-6 respectively to 40 CFR part 60, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A-4 to 40 CFR part 60, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source	Emissions must not exceed 10 percent opacity	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A-4 to 40 CFR part 60, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 4, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 4	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this table 4; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of table 5 to this subpart and §63.7112(k), and you demonstrate initial compliance with

		applicable building vent emissions limitations according to the requirements in items 2 and 3 of this table 4.
6. Each FF that controls emissions from only an individual storage bin	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A-4 to 40 CFR part 60, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions	You must comply with emission limitations in items 2 and 3 of this Table 4	You demonstrate initial compliance according to the requirements in items 2 and 3 of this table 4.
8. All new or existing lime kilns and their associated lime coolers (kilns/coolers)	You must meet the emission limitations for HCl, mercury, total organic HAP, and dioxins and furans in items 5 through 16 of Table 1.	The kiln outlet HCl, mercury, total organic HAP, and D/F emissions (and if applicable, summed with the separate cooler emissions), based on the emissions measured according to table 5 to this subpart over the period of the initial performance test do not exceed the applicable limits in items 5 through 16 of table 1 to this subpart. If the emission unit is controlled with a wet scrubber, during the HCl performance test you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the performance test during which emissions did not exceed the HCl emissions limitation. If the emission unit is controlled with a dry sorbent injection, during the HCl performance test you have a record of the dry sorbent flow rate operating parameter over the HCl performance test during which emissions did not exceed the HCl emissions limitation. If the emission unit is controlled with a thermal oxidizer, during the total organic HAP and D/F performance test(s) you have a record of the temperature operating parameter over the total organic HAP and D/F performance test during which emissions did not exceed the total

		organic HAP and D/F emissions limitation(s). If the emission unit is controlled with an activated carbon injection, during the total organic HAP, D/F, and mercury performance test(s) you have a record of the temperature operating parameter over the total organic HAP, D/F, and mercury performance test(s) during which emissions did not exceed the total organic HAP, D/F, and mercury emissions limitation(s).

Table 5 to Subpart AAAAA of Part 63—Requirements for Performance Tests

As required in §63.7112, you must conduct each performance test in the following table that applies to you.

For . . .	**You must . . .**	**Using . . .**	**According to the following requirements . . .**
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Select the location of the sampling ports and the number of traverse points	Method 1 or 1A of appendix A-1 to 40 CFR part 60; and §63.6(d)(1)(i)	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Determine velocity and volumetric flow rate	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A-1 and A-2 to 40 CFR part 60	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Conduct gas molecular weight analysis	Method 3, 3A, or 3B in appendix A-2 to 40 CFR part 60	You may use manual procedures (but not instrumental procedures) of ASME PTC 19.10-1981 - Part 10 (available for purchase from Three Park Avenue, New York, NY 10016-5990) as an alternative to using Method 3B.
4. Each lime kiln and each associated lime cooler, if there is a	Measure moisture content of the stack gas	Method 4 in appendix A-3 to 40 CFR part 60	Not applicable.

separate exhaust to the atmosphere from the associated lime cooler			
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device	Measure PM emissions	Method 5 in appendix A-3 to 40 CFR part 60	Conduct the test(s) when the source is operating at representative operating conditions in accordance with §63.7(e) before the relevant compliance date for your source as specified in §63.7083(e) and §63.7112(b) on and after the relevant compliance date for your source as specified in §63.7083(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP	Measure PM emissions	Method 5D in appendix A-3 to 40 CFR part 60	Conduct the test(s) when the source is operating at representative operating conditions in accordance with §63.7(e) before the relevant compliance date for your source as specified in §63.7083(e) and §63.7112(b) on and after the relevant compliance date for your source as specified in §63.7083(e); If there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 or 5D test of the separate cooler exhaust concurrently with the kiln exhaust test. Refer to item 5 of this table for sampling time and volume requirements.
7. Each lime kiln	Determine the mass rate of stone feed to	Any suitable device	Calibrate and maintain the device according to

	the kiln during the kiln performance test		manufacturer's instructions; the measuring device used must be accurate to within ±5 percent of the mass rate of stone feed over its operating range.
8. Each lime kiln equipped with a wet scrubber	Establish the operating limit for the average gas stream pressure drop across the wet scrubber during the PM and HCl performance test(s)	Data for the gas stream pressure drop measurement device during the kiln performance test	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to §63.7112(j).
9. Each lime kiln equipped with a wet scrubber	Establish the operating limit for the average liquid flow rate to the scrubber during the PM and HCl performance test(s)	Data from the liquid flow rate measurement device during the kiln performance test	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to §63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector	Have installed and have operating the BLDS or PM detector prior to the PM performance test	Standard operating procedures incorporated into the OM&M plan	According to the requirements in §63.7113(d) or (e), respectively.
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS	Have installed and have operating the COMS prior to the performance test	Standard operating procedures incorporated into the OM&M plan and as required by the general provisions of subpart A of this part and according to PS-1 of appendix B 40 CFR part 60, except as specified in §63.7113(g)(2)	According to the requirements in §63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions,	Measure PM emissions	Method 5 or Method 17 in appendix A-3 and A-6 to 40 CFR part 60	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient

which is subject to a PM emission limit			temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit	Conduct opacity observations	Method 9 in appendix A-4 to 40 CFR part 60	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber	Establish the average gas stream pressure drop across the wet scrubber during the PM and HCl performance test(s)	Data for the gas stream pressure drop measurement device during the PSH operation stack performance test	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to §63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber	Establish the operating limit for the average liquid flow rate to the scrubber during the PM and HCl performance test(s)	Data from the liquid flow rate measurement device during the PSH operation stack performance test	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to §63.7112(j).
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin	Conduct opacity observations	Method 9 in appendix A-4 to 40 CFR part 60	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.

17. Fugitive emissions from any PSH operation subject to an opacity limit	Conduct opacity observations	Method 9 in appendix A-4 to 40 CFR part 60	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit	Conduct VE check	The specifications in §63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.
19. Each lime kiln	Measure hydrogen chloride	Method 320 or 321 of appendix A to this part or ASTM 6348-12 (Reapproved 2020)[1, 2]	The test duration must be at least one hour. HCl must be used for the analyte spiking. For a positive pressure FF or ESP, determine the number of sampling points per the stratification check procedures of section 8.1.2 of Method 7E in appendix A-4 to 40 CFR part 60 using the sample points determined using the procedures of Section 8 of EPA Method 5D.
20. Each lime kiln	Measure mercury	Method 29 or 30B Appendix A-8 to 40 CFR part 60 or ASTM D6784-16[2]	For Method 29 and ASTM D6784-16[2] the test duration must be at least two hours and the sample volume must be at least 1.70 dscm (60 dscf). For Method 30B, the test duration must be at least one hour and the sample volume at least 100 liters. For a positive pressure FF or ESP, use the procedures of Section 8 of EPA Method 5D for sampling points.

21. Each lime kiln	Measure total organic HAP[3]	Method 18 and/or 320 in appendix A to part 60 of this chapter and/or ASTM D6348-12e1[1]	The test duration must be at least 1 hour. For EPA Method 320 and ASTM D6348-12e1, for a positive pressure FF or ESP, determine the number of sampling points per the stratification check procedures of section 8.1.2 of Method 7E using the sample points determined using the procedures of Section 8 of EPA Method 5D.
22. Each lime kiln	Measure dioxins/furans	Method 23 in Appendix A-7 to 40 CFR part 60	The test duration must be at least 3 hours and the must be at least 3 dscm (106 dscf). For a positive pressure FF or ESP, use the procedures of Section 8 of EPA Method 5D for sampling points.
23. Each lime kiln equipped with dry sorbent injection	Establish the operating limit for the dry sorbent flow rate during the HCl performance test	Data for the dry sorbent flow rate device during the HCl performance test	The flow monitor must meet the criteria in §63.7113(h); you must collect the dry sorbent flow rate data during the period of the HCl performance test and determine the operating limit according to §63.7112(j).
24. Each lime kiln equipped with a thermal oxidizer	Establish the operating limit for the combustion chamber temperature during the total organic HAP and D/F performance test(s)	Data for the temperature device during the total organic HAP and D/F performance test(s)	The temperature device must meet the criteria in §63.7113(i); you must collect the temperature data during the period of the total organic HAP and D/F performance test(s) and determine the operating limit according to §63.7112(j).
25. Each lime kiln equipped with activated carbon injection	Establish the operating limit for the combustion chamber temperature during the total organic HAP, D/F, and mercury performance test(s)	Data for the activated carbon flow rate device during the total organic HAP, D/F, and mercury performance test(s)	The flow monitor must meet the criteria in §63.7113(h); you must collect the activated carbon flow rate data during the period of the total organic HAP, D/F, and mercury performance test(s)and determine the operating limit according to §63.7112(j).

[1] When using ASTM D6348-12 (Reapproved 2020) the test plan preparation and implementation in the Annexes to ASTM D6348-12 (Reapproved 2020), annexes A1 through A8 are mandatory, In ASTM D6348-12 (Reapproved 2020) Annex A5 (Analyte Spiking Technique), the percent (%) R must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be 70 % ≥ R ≤ 130%. If the %R value does not meet this criterion for a target compound, the test data is not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound according to:
Reported Results = ((Measured Concentration in Stack))/(%R) x 100.
[2] Incorporated by reference, see § 63.14.
[3] Total Organic HAP is the sum of the concentrations of compounds of formaldehyde, acetaldehyde, toluene, benzene, m-xylene, p-xylene, o-xylene, styrene, ethyl benzene, and naphthalene.

Table 6 to Subpart AAAAA of Part 63—Continuous Compliance With Operating Limits
As required in §63.7121, you must demonstrate continuous compliance with each operating limit listed in Table 3 to subpart AAAAA that applies to you, according to the following table:

For . . .	**For the following operating limit . . .**	**You must demonstrate continuous compliance by . . .**
1. Each lime kiln controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test	Collecting the wet scrubber operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within ±1% and the continuous pressure drop measurement device must be accurate within ±1%).

2. Each lime kiln or lime cooler equipped with a FF and using a BLDS, and each lime kiln equipped with an ESP or FF using a PM detector	a. Maintain and operate the FF or ESP such that the bag leak or PM detector alarm, is not activated and alarm condition does not exist for more than 5 percent of the total operating time in each 6-month period	(i) Operating the FF or ESP so that the alarm on the bag leak or PM detection system is not activated and an alarm condition does not exist for more than 5 percent of the total operating time in each 6-month reporting period; and continuously recording the output from the BLD or PM detection system; and
		(ii) Each time the alarm sounds and the owner or operator initiates corrective actions within 1 hour of the alarm, 1 hour of alarm time will be counted (if the owner or operator takes longer than 1 hour to initiate corrective actions, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions); if inspection of the FF or ESP system demonstrates that no corrective actions are necessary, no alarm time will be counted.
3. Each stack emissions source from a PSH operation subject to an opacity limit, which is controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test	Collecting the wet scrubber operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within ±1% and the continuous pressure drop measurement device must be accurate within ±1%).

4. For each lime kiln or lime cooler equipped with a FF or an ESP that uses a COMS as the monitoring device	a. Maintain and operate the FF or ESP such that the average opacity for any 6-minute block period does not exceed 15 percent	i. Installing, maintaining, calibrating and operating a COMS as required by the general provisions of subpart A of this part and according to PS-1 of appendix B 40 CFR part 60, except as specified in §63.7113(g)(2); and
		ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
7. Each lime kiln equipped with dry sorbent and/or activated carbon injection	Maintain the 3-hour block dry sorbent and/or activated carbon flow rate greater than or equal to the stack flow rate operating limit established during the most recent performance test.	Collecting the dry sorbent and/or activated carbon injection operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average injection flow rate greater than or equal to the injection flow rate operating limit established during the performance test
8. Each lime kiln equipped with a thermal oxidizer	Maintain the 3-hour block average combustion chamber temperature greater or equal to the combustion chamber operating limit established in the most recent performance test	Collecting the thermal oxidizer operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average combustion chamber temperature greater than or equal to the combustion chamber operating limit established during the performance test

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Table 8 to Subpart AAAAA of Part 63—Requirements for Reports

As required in §63.7131, you must submit each report in this table that applies to you.

You must submit a . . .	**The report must contain . . .**	**You must submit the report . . .**

1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period;	Semiannually according to the requirements in §63.7131(b).
	b. If there were no periods during which the CMS, including any operating parameter monitoring system, was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period;	Semiannually according to the requirements in §63.7131(b).
	c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in §63.7131(d);	Semiannually according to the requirements in §63.7131(b).
	d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in §63.8(c)(7), the report must contain the information in §63.7131(e); and	Semiannually according to the requirements in §63.7131(b).
	e. Before the relevant compliance date for your source as specified in §63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i). On and after the relevant compliance date for your source as specified in §63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you failed to meet an applicable standard, the compliance report must include the information in §63.7131(c)(3).	Semiannually according to the requirements in §63.7131(b).
2. Before the relevant compliance date for your source as specified in §63.7083(e), an	Actions taken for the event	By fax or telephone within 2 working days after

immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP		starting actions inconsistent with the SSMP.
3. Before the relevant compliance date for your source as specified in §63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP	The information in §63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See §63.10(d)(5)(ii).
(4) Performance Test Report	The information required in §63.7(g) and §63.7112(h)	According to the requirements of §63.7131

Table 9 to Subpart AAAAA of Part 63 – Emissions Averaging Emission Limits
As required in §63.7090(d), if you are using emissions averaging for either HCl emission limits or mercury emission limits you must meet each emission limit in the following table that applies to you.

For . . .	**You must meet the following emission limit**
1. Existing straight rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 2.1 lb/ton of lime produced.
2. Existing straight rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.047 lb/ton of lime produced.
3. Existing preheater rotary lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 0.36 lb/ton of lime produced.
4. Existing preheater rotary lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.087 lb/ton of lime produced.
5. All vertical lime kilns and their associated coolers producing dolomitic quick lime and/or dead burned dolomitic lime	HCl emissions must not exceed 0.36 lb/ton of lime produced.

6. All vertical lime kilns and their associated coolers producing high-calcium quick lime	HCl emissions must not exceed 0.019 lb/ton of lime produced.
7. Existing lime kilns and their associated coolers	Mercury emissions must not exceed 31 lb/MMton of lime produced.

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14. Add tables 10 and 11 to subpart AAAAA to read as follows:

Table 10 to Subpart AAAAA of Part 63—Applicability of General Provisions to Subpart AAAAA
As required in §63.7140, you must comply with the applicable General Provisions requirements according to the following table:

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.1(a)(1)-(4)	Applicability	Yes	
§63.1(a)(5)		No	
§63.1(a)(6)	Applicability	Yes	
§63.1(a)(7)-(a)(9)		No	
§63.1(a)(10)-(a)(14)	Applicability	Yes	
§63.1(b)(1)	Initial Applicability Determination	Yes	§§63.7081 and 63.7142 specify additional applicability determination requirements.
§63.1(b)(2)		No	
§63.1(b)(3)	Initial Applicability Determination	Yes	
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)	Permit Requirements	No	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§63.1(c)(3)-(4)		No	
§63.1(c)(5)	Area Source Becomes Major	Yes	

§63.1(c)(6)	Reclassification	Yes	
§63.1(d)		No	
§63.1(e)	Applicability of Permit Program	Yes	
§63.2	Definitions	Yes	Additional definitions in §63.7143.
§63.3(a)-(c)	Units and Abbreviations	Yes	
§63.4(a)(1)-(a)(2)	Prohibited Activities	Yes	
§63.4(a)(3)-(a)(5)		No	
§63.4(b)-(c)	Circumvention, Severability	Yes	
§63.5(a)(1)-(2)	Construction/Reconstruction	Yes	
§63.5(b)(1)	Compliance Dates	Yes	
§63.5(b)(2)		No	
§63.5(b)(3)-(4)	Construction Approval, Applicability	Yes	
§63.5(b)(5)		No	
§63.5(b)(6)	Applicability	Yes	
§63.5(c)		No	
§63.5(d)(1)-(4)	Approval of Construction/Reconstruction	Yes	
§63.5(e)	Approval of Construction/Reconstruction	Yes	
§63.5(f)(1)-(2)	Approval of Construction/Reconstruction	Yes	
§63.6(a)	Compliance for Standards and Maintenance	Yes	
§63.6(b)(1)-(5)	Compliance Dates	Yes	
§63.6(b)(6)		No	
§63.6(b)(7)	Compliance Dates	Yes	
§63.6(c)(1)-(2)	Compliance Dates	Yes	
§63.6(c)(3)-(c)(4)		No	
§63.6(c)(5)	Compliance Dates	Yes	
§63.6(d)		No	

§63.6(e)(1)(i)	General Duty to Minimize Emissions	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for general duty requirement.
§63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Yes	
§63.6(e)(2)		No	[Reserved]
§63.6(e)(3)	Startup, Shutdown Malfunction Plan	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), the OM&M plan must address periods of startup and shutdown. See §63.7100(d).

§63.6(f)(1)	SSM exemption	No	See §63.7100. For periods of startup and shutdown, see §63.7090(c).
§63.6(f)(2)-(3)	Methods for Determining Compliance	Yes	
§63.6(g)(1)-(g)(3)	Alternative Standard	Yes	
§63.6(h)(1)	SSM exemption	No	See §63.7100. For periods of startup and shutdown, see §63.7090(c).
§63.6(h)(2)	Methods for Determining Compliance	Yes	
§63.6(h)(3)		No	
§63.6(h)(4)-(h)(5)(i)	Opacity/VE Standards	Yes	This requirement only applies to opacity and VE performance checks required in table 5 to this subpart.
§63.6(h)(5) (ii)-(iii)	Opacity/VE Standards	No	Test durations are specified in this subpart; this subpart takes precedence.
§63.6(h)(5)(iv)	Opacity/VE Standards	No	
§63.6(h)(5)(v)	Opacity/VE Standards	Yes	
§63.6(h)(6)	Opacity/VE Standards	Yes	
§63.6(h)(7)	COM Use	Yes	
§63.6(h)(8)	Compliance with Opacity and VE	Yes	
§63.6(h)(9)	Adjustment of Opacity Limit	Yes	
§63.6(i)(1)-(i)(14)	Extension of Compliance	Yes	
§63.6(i)(15)		No	
§63.6(i)(16)	Extension of Compliance	Yes	
§63.6(j)	Exemption from Compliance	Yes	
§63.7(a)(1)-(a)(3)	Performance Testing Requirements	Yes	§63.7110 specifies deadlines; §63.7112 has additional specific requirements.
§63.7(b)	Notification	Yes	

§63.7(c)	Quality Assurance/Test Plan	Yes	
§63.7(d)	Testing Facilities	Yes	
§63.7(e)(1)	Conduct of Tests	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7112(b).
§63.7(e)(2)-(4)	Conduct of Tests	Yes	
§63.7(f)	Alternative Test Method	Yes	
§63.7(g)	Data Analysis	Yes	
§63.7(h)	Waiver of Tests	Yes	
§63.8(a)(1)	Monitoring Requirements	Yes	See §63.7113.
§63.8(a)(2)	Monitoring	Yes	
§63.8(a)(3)		No	
§63.8(a)(4)	Monitoring	No	Flares not applicable.
§63.8(b)(1)-(3)	Conduct of Monitoring	Yes	
§63.8(c)(1)(i)	CMS Operation/Maintenance	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for OM&M requirements.
§63.8(c)(1)(ii)	CMS Spare Parts	Yes	

§63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), no longer required.
§63.8(c)(2)-(3)	CMS Operation/Maintenance	Yes	
§63.8(c)(4)	CMS Requirements	No	See §63.7121.
§63.8(c)(4)(i)-(ii)	Cycle Time for COM and CEMS	Yes	No CEMS are required under this subpart; see §63.7113 for CPMS requirements.
§63.8(c)(5)	Minimum COM procedures	Yes	COM not required.
§63.8(c)(6)	CMS Requirements	No	See §63.7113.
§63.8(c)(7)-(8)	CMS Requirements	Yes	
§63.8(d)(1)-(2)	Quality Control	Yes	See also §63.7113.
§63.8(d)(3)	Quality Control	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.8(e)	Performance Evaluation for CMS	Yes	See also §63.7113
§63.8(f)(1)-(f)(5)	Alternative Monitoring Method	Yes	

§63.8(f)(6)	Alternative to Relative Accuracy Test for CEMS	No	No CEMS required in this subpart.
§63.8(g)(1)-(g)(5)	Data Reduction; Data That Cannot Be Used	No	See data reduction requirements in §§63.7120 and 63.7121.
§63.9(a)	Notification Requirements	Yes	See §63.7130.
§63.9(b)	Initial Notifications	Yes	
§63.9(c)	Request for Compliance Extension	Yes	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	
§63.9(f)	Notification of VE/Opacity Test	Yes	This requirement only applies to opacity and VE performance tests required in table 5 to this subpart. Notification not required for VE/opacity test under table 7 to this subpart.
§63.9(g)	Additional CMS Notifications	No	Not required for operating parameter monitoring.
§63.9(h)(1)-(h)(3)	Notification of Compliance Status	Yes	
§63.9(h)(4)		No	
§63.9(h)(5)-(h)(6)	Notification of Compliance Status	Yes	
§63.9(i)	Adjustment of Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	
§63.9(k)	Electronic reporting procedures	Yes	Only as specified in §63.9(j)
§63.10(a)	Recordkeeping/Reporting General Requirements	Yes	See §§63.7131 through 63.7133.
§63.10(b)(1)	Records	Yes	
§63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	Yes before the relevant compliance date	

		for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7132 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§63.10(b)(2)(iii)	Maintenance Records	Yes	
§63.10(b)(2)(iv)-(v)	Actions Taken to Minimize Emissions During SSM	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for OM&M requirements.
§63.10(b)(2)(vi)-(xii)	Recordkeeping for CMS	Yes	
§63.10(b)(2)(xiii)	Records for Relative Accuracy Test	No	
§63.10(b)(2)(xiv)	Records for Notification	Yes	
§63.10(b)(3)	Applicability Determinations	Yes	

§63.10(c)	Additional CMS Recordkeeping	No	See §63.7132.
§63.10(d)(1)	General Reporting Requirements	Yes	
§63.10(d)(2)	Performance Test Results	Yes	
§63.10(d)(3)	Opacity or VE Observations	Yes	For the periodic monitoring requirements in table 7 to this subpart, report according to §63.10(d)(3) only if VE observed and subsequent visual opacity test is required.
§63.10(d)(4)	Progress Reports	Yes	
§63.10(d)(5)(i)	Periodic Startup, Shutdown, Malfunction Reports	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7131 for malfunction reporting requirements.
§63.10(d)(5)(ii)	Immediate Startup, Shutdown, Malfunction Reports	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.10(e)	Additional CMS Reports	No	See specific requirements in this subpart, see §63.7131.
§63.10(f)	Waiver for Recordkeeping/Reporting	Yes	

§63.11(a)-(b)	Control Device and Work Practice Requirements	No	Flares not applicable.
§63.12(a)-(c)	State Authority and Delegations	Yes	
§63.13(a)-(c)	State/Regional Addresses	Yes	
§63.14(a)-(b)	Incorporation by Reference	No	
§63.15(a)-(b)	Availability of Information and Confidentiality	Yes	
§63.16	Performance Track Provisions	Yes	

Table 11 to Subpart AAAAA of Part 63— Toxicity equivalence factors (TEFs) for human health risk assessment of polychlorinated dibenzo-p-dioxins, dibenzofurans, and dioxin-like polychlorinated biphenyls

Dioxin/Furan	2005 TEFs[1]
2,3,7,8-TCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
OCDD	0.0003
2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDF	0.03
2,3,4,7,8-PeCDF	0.3
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
OCDF	0.0003

[1] EPA/100/R-10/005, "*Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds*", December 2010 (incorporated by reference, see § 63.14).